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SOME CASES OF JAUNDICE IN CHILDHOOD.*

By F. J. POYNTON, M.D., F.R.C.P.Lond.,

*Senior Physician to Out-patients at University College Hospital and the
Hospital for Sick Children, Great Ormond Street; Physician
in Charge of the Children's Ward, University College
Hospital.*

It is interesting to notice, in the history of medicine, how a subject may appear to remain quiescent for a while, and then, almost suddenly, come to the fore and disclose the steady progress that all the time has in reality been taking place. We find, too, not infrequently that these advances do not occur by a direct route, but rather by a series of side tracks which gradually converge to the main road. In various countries, and in France particularly, a great deal of attention has been paid in recent years to the condition of the blood in jaundice, and to the interactions of the liver, spleen, kidneys, and even bone-marrow. Many new thoughts and suggestions have arisen, and the whole subject of jaundice is now in a condition of evolution. Some years ago I touched upon this point in a lecture given at Great Ormond Street on "Family Periodic, or Acholuric Jaundice," and from time to time I have recorded interesting cases of jaundice in childhood, to some of which I again refer here. The numerous researches that have been made upon

* A lecture delivered at Great Ormond Street, November, 1912.

acholuric jaundice have led us among such interesting conditions as icterus neonatorum, Banti's disease, pernicious anæmia and splenic anæmia infantum, and here we find ourselves in great danger of getting lost in confusion. We realise, too, that we have to consider very carefully whether our clinical types represent special diseases or possibly only special phases of disease.

Leuret's interesting paper upon icterus neonatorum ('Archives des Maladies du Cœur,' 1910, iii, p. 236) gives some important details about icterus neonatorum which may well introduce the main facts of this lecture. Not only does Leuret, who looks upon this icterus as the type of an acholuric jaundice, describe some histological investigations, but he compares these results with experimental investigations upon rabbits by ligature of the common bile-duct, injection with toluyyl-diamine, and intoxication with chloroform. In icterus neonatorum, should death occur in the early or red stage of the affection, the liver is found gorged with blood, the biliary channels are full of bile, and the liver-cells of a normal colour. On the other hand, in the late or yellow stage, the liver-cells are impregnated with a great abundance of an ochre-yellow pigment, which by suitable staining gives the reaction of free iron. Masses of the same pigment are found in the blood-vessels, and macrophage leucocytes are also to be seen loaded with the same.

The spleen in the red stage is greatly congested and filled with blood-pigment, and the splenic pulp is dull brown in colour, and numerous macrophages are here crammed with the ochre-coloured pigment.

In the kidneys there are also found in the bases of the convoluted tubules some ochre-coloured granules containing iron, and in the Malphigian bodies and lumens of the urinary tubules much yellow pigment not containing iron.

In the condition of icterus neonatorum with its active hæmolysis, it is apparent that the iron is retained in the liver, spleen and kidneys, while the liver and kidneys excrete bilirubin and the urinary pigments which do not contain iron. There would appear to be an intense reaction in the spleen, with great activity of the macrophage leucocytes, resulting in the disintegration of the red cells with retention of their iron, and liberation of blood-pigments free from iron. These latter pass by the splenic vein to the liver, and, should any red cells containing iron also escape to the liver, these are taken up by the cells of Küpfer. The rapid flow of blood-pigment to the liver will stimulate the liver-cells to much activity, and thus excess of bilirubin escapes into the general circulation.

When the common bile-duct was occluded by a ligature Leuret found in the rabbit masses of yellow pigment which did not give the iron reactions in the liver, spleen and kidney. Where toluyl-diamine was injected subcutaneously he found, on the other hand, a condition resembling that already described as occurring in *icterus neonatorum*. In these experiments he studied also the bone-marrow, and concluded that it assisted the action of the spleen by means of its macrophage cells. Leuret, it is clear, attached great importance to the spleen in the history of acholuric jaundice, and he suggested that it is possible that the pigments liberated by this organ from the disintegrating blood-cells may cause some slight jaundice without the liver being necessarily implicated in the formation of bilirubin, and further that urobilin may be in part of splenic origin.

With these introductory remarks I pass to my first group of cases, which are examples of a prolonged jaundice dating from birth and in nature apparently obstructive. My facts are only imperfect for they have all been private cases, but they are, I think, deserving of some attention. This group contains three infants and one adult.

The first case was a female, aged 3 months, who had been jaundiced from birth. The conjunctival mucous membrane and skin were yellow, the motions white and undigested, the urine very dark, the liver was large but not hard, the spleen was not felt, the umbilicus was healthy, the temperature generally subnormal. There was no evidence of congenital syphilis and the one other child was very healthy. From time to time a little bile appeared in the motions and at these times the skin became less yellow. The child had not been breast fed. Gradually, by about the twelfth month, the jaundice disappeared and complete recovery followed.

The second case was a male, aged 4 weeks, and a first child of healthy parents. No cause was apparent for the jaundice, which appeared upon the third day and had persisted. This child was definitely jaundiced, the stools were large, white and undigested, the urine contained bile-salts, the liver was large but not tender or hard. Here again it had been noticed that some bile appeared in the motions occasionally and that then the colour improved. Two months later the motions were mustard-coloured and the liver distinctly smaller. At about the seventh month the jaundice had disappeared and the liver had still further diminished. This child was circumcised later, and died, I was informed, of spreading gangrene. He was never breast-fed, but given cow's milk.

My third case was a male infant, aged 4 weeks, who showed jaundice in the first week. Here, again, the jaundice was persistent,

the liver was enlarged but the spleen was not felt, the motions were white and undigested. Again, also, some bile was occasionally seen in the stools. Slowly, after many weeks, the jaundice disappeared, the liver became smaller, and in this case complete recovery resulted. The child was never breast-fed, but given at first cow's milk.

The fourth case I only saw as an adult of some 30 years. She had been born with jaundice, and from early days an enlarged spleen was noticed. In addition to this there was congenital morbus cordis of slight degree and congenital absence of the left upper extremity below the middle of the arm. This patient was always a yellowish colour, and had from time to time severe attacks of intense jaundice with dead-white stools and an urine almost black with bile-pigment. These attacks lasted about ten to fourteen days. Curiously obstinate ulcers of considerable size broke out from time to time upon the legs above the ankles and required much care in their treatment. In this case the spleen was greatly enlarged, and during the attacks of acute jaundice the liver also enlarged very considerably.

This patient had passed through about fifty acute attacks of obstructive jaundice.

I mention this case because it would seem probable that we had here, in view of the other congenital defects, a possible congenital maldevelopment or hypoplasia of the common bile-duct.

The other three cases are worthy of attention on account of the difficulty in the diagnosis and the great care required in the diet. For my own part it seems to me a very difficult matter to distinguish them from the cases of atresia of the biliary passages which usually terminate fatally in the first year. I would emphasise these points: First, the absence of splenic enlargement; secondly, the comparatively slight degree of the jaundice; and thirdly, the natural consistence of the enlarged liver. My colleague, Dr. Still, has commented upon similar cases in his monograph upon 'Common Diseases in Childhood.' It seems clear that they are obstructive, and if we follow Leuret closely they are apparently not of the same nature as the icterus neonatorum which is the type of an acholuric jaundice. This point, however, doubtless needs more investigation. I have suggested an unusually viscid bile as a possible cause of the condition based upon an autopsy in which such a viscid fluid was found. One wonders whether in the future such cases as these may not throw light upon Gee's coeliac disease, Cheadle's acholia, or the American Herter's affection.

The treatment is not easy and requires both patience and care in

the feeding. Fats are not tolerated and the nutrition flags. Among the foods with which I have succeeded have been asses' milk, Benger's food, Horlick's malted milk, the Walker Gordon modified milk with the fats much limited, raw meat-juice and brandy. Among drugs, small doses of grey powder and bicarbonate and salicylate of soda have seemed to me the most serviceable. These children gain weight very slowly and with much difficulty, and are always anxious cases in the early months.

We have in the preceding group distinct evidence of some biliary obstruction more or less complete, but the next group is of the acholuric type and bears several names, such as "family acholuric jaundice," "congenital family periodic jaundice." No disease of this kind has perhaps attracted more attraction of late years, for though it is rare, it is so instructive as to stimulate research in all directions. Some years ago I gave my experience of these cases, and since then I have had four families under my observation, and am the more impressed with their scientific importance. It has been my experience to find that the parents have said in most of these cases that the jaundice has been first noticed about a fortnight after birth, but I have also had this evidence of late in one of my families that a child was born deeply jaundiced and died in a few days. Whether or not this was a case of the same nature as the others in the family I cannot say. The disease runs in families and has these cardinal features: there is an acholuric jaundice with enlargement of the liver and spleen and anæmia of varying degree. There are apparently two chief types: one in which there is a persistent yellow colour of mild degree, but varying in depth from time to time; the other in which anæmia is prominent and there are outbursts of very definite and sometimes extreme jaundice.

The red blood-corpuscles tested *in vitro* in normal saline solution of varying strength often show a remarkable fragility. I am not quite sure this is constant, but it is certainly a very frequent event. The red blood-cells also show a number of reticulated red corpuscles, such as are also found in icterus neonatorum. These have been much studied on the continent since Pappenheim's work on the subject, but I believe Dr. Lukis, a house-physician to the Hospital for Sick Children, Great Ormond Street, is the first in this country to investigate them in three of my cases. The method of staining, the so-called "vital staining" of Pappenheim, necessitates special methods, and the blood must not be fixed. These cells with the curious reticulated protoplasm are probably of an embryonic nature and point to activity in the formation of the red cells, which are

possibly needed to replace the fragile cells which are being continuously destroyed. They occur in normal blood in about 1 per cent. to 2 per cent., but are numerous in the foetal blood. In many forms of severe anæmia they are increased and are a very usual feature in acholuric family jaundice. Dr. Lukis examined four cases in one family. The father, who was a classical example, showed 6 per cent.; a daughter closely alike to him in every respect, aged $8\frac{1}{2}$ years, 8 per cent.; a sister definitely but less affected, 5 per cent.; another sister, free from jaundice, 0.2 per cent.

These children are not robust, although when they grow up they manage to work at some employment. Two of the fathers who are affected are in steady employment and one of the daughters. With a solitary exception all of them seem to suffer in the cold weather. The exception was always in worse health in the heat.

These cases sometimes develop a rapid anæmia, which was preceded in two of my own by considerable pyrexia. I found, too, that I had been treating one of my cases for anæmia a year before I made the diagnosis which followed the examination of another child of the same family. In one girl there was a dusky pigmentation with debility and fainting attacks, and when I showed this case at the clinical meeting of the Association of Physicians, several distinguished clinicians were convinced that this was a case of Addison's disease. Personally I doubted this, for I had had the advantage of seeing this same child in an attack of acholuric jaundice followed by anæmia, and had noticed the enlargement of the liver and spleen. Fragility of the blood-corpuscles was also demonstrated by Dr. Embleton. Since the suggestion of Addison's disease I have again got in touch with this case, which was one of a family, and when I last saw her in September she was much better, the pigmentation less, and the resemblance, so striking before to Addison's disease, is now far less obvious. The red cells in one of my cases sank to 1,860,000 per c.mm. The colour index is usually high (about 1), and the red cells show anisocytosis and poikilocytosis.

There is no doubt, I think—and Dr. Parkes Weber agrees—that the condition may appear as one of anæmia with slight enlargement of the spleen, the jaundice passing into abeyance, and then unless one should happen to know the history it cannot be expected that at first a diagnosis would be made. One of my cases was admitted as an intussusception. We might well wonder at first sight how this could happen, and it is the more interesting when I add that I had unwittingly been treating the boy's aunt for suspected gall-stones.

These facts lead me to emphasise the attacks of acute abdominal pain that are not infrequent in such cases, and which were the explanation of these two diagnoses. Some of these patients have indeed had gallstones; others have had severe and recurrent attacks of pain over the spleen; others, again, pain suggestive of gastric ulcer. They are symptoms of great importance, because they are the ones that make us consider whether any radical steps should be taken to prevent them. Excision of the spleen has been apparently successful in two Australian cases, and recently Dr. Box has recorded one which, however, proved fatal, though at a time when there was every reason to expect success. My colleague, Dr. Thursfield, has also had a remarkable success. It is clear that such treatment is only indicated when there are urgent symptoms—at least this is correct I think in the present state of our knowledge—and whether it is a sound procedure will need more experience. I am convinced that some of the cases of slight severity gradually get well as they grow older, the jaundice gets less, the general health better, the pains fewer, the spleen gets smaller, and the liver, which is never large except in a severe attack of jaundice, may not be felt below the costal margin. At present I have no observation upon the fragility of the red cells in this condition of recovery, but shall hope to obtain a record when I can trace one of these children who has, in my opinion, overcome the disease.

The spleen in the older patients may reach a large size and become unusually hard, and such cases, I think, usually show considerable anæmia. I think arsenic is of service for the anæmia; rest, warmth, opiates and hot applications are indicated for the pain and jaundice.

My last group is of a different nature and syphilitic in origin.

A boy, aged 9 years, came to hospital very ill with intense jaundice, a much enlarged liver and ascites. The jaundice was obstructive in type. The illness had commenced four days before with abdominal pains and vomiting. In hospital, vomiting, fever and delirium developed, and later nystagmus, squinting and diplopia. Paracentesis of the abdomen was necessitated, soon after which he became comatose and died. The great interest of the case lay in the fact that he had been under my care two years before for *epileptic fits*, which had commenced when he was seven and which were both major and minor attacks. The major attacks disappeared when he was having a course of bromide of potassium, and the minor attacks much diminished while taking urethane. His parents had, in fact, considered him cured, and had not brought him up for sixteen months.

prior to his fatal illness. It was not until this second occasion that I had realised the meaning of some scars at the angles of his mouth and pegged teeth.

The post-mortem examination showed a greatly enlarged smooth liver, with a thickened capsule, which on section showed mottled red and yellow areas. The spleen was enlarged and firm, scarred on its surface and surrounded by adhesions. The kidneys were firm. The brain showed chronic meningitis. Microscopical examination of the liver showed destructive and atrophic changes in the cells, but no *fibrosis*. The condition was one of acute parenchymatous disease of the liver. The kidneys showed an early interstitial nephritis, and the radial, renal and coronary arteries endarteritis obliterans. There was some optic atrophy.

The sequence of events in this case was, first an eclampsia, indistinguishable in character from idiopathic epilepsy, then improvement, and lastly, about two years from the time of his first visit, an acute hepatic illness with meningeal symptoms. The post-mortem lesions were those associated with syphilis.

The next case, a boy, aged 10 years, came under my notice with a history of four weeks' illness, with vomiting and swelling of the abdomen. He was very ill, and though there was no obvious jaundice there was bile in the urine. The liver was large and firm and there was ascites. He only lived a week, and drifted, as the preceding case had done, into a condition of meningism with fever and fatal coma after paracentesis.

The post-mortem examination showed chronic meningitis with advanced endarteritis of the vessels of the circle of Willis. The liver, both macroscopically and microscopically, showed parenchymatous changes as in the previous case. The spleen was large and firm and was surrounded by adhesions. The kidneys were firm and they showed epithelial destruction.

This case was almost a duplicate of the previous one, except that here there was no evidence of syphilis during life. It resembled the first in the age and sex of the patient and in the prolonged history of fits before the fatal hepatic illness, which was rapid in development and acute in its course.

I am indebted to my colleague, Dr. F. S. Langmead, and to Dr. J. G. Forbes for the pathological findings in these two cases.

Here, again, we come to the special interest of this case. Three years before the final illness this boy *had developed fits*, attributed to a fall on the back of his head. They occurred about twice a month, were not preceded by an aura, and consisted in slight

twitchings of the hands and face followed by unconsciousness and sleep. He was one of six children, all the others being, it was said, in good health. Since the first fit he had become morally deficient and mentally backward.

The next case illustrates, I think, a warning of the same sequence of events, but as the child, now an adolescent, is still alive, and the condition was quite a passing one, I only put it forward as suggestive. A boy, aged 7 years, was brought to hospital in August, 1904, for "fits," from which he had suffered for three years. In this instance there was a *history of "fits"* on the maternal side, and his mother admitted that she had suffered from syphilis. This boy, as in the preceding case, had seemed dull and backward since the first attack. There was apparently nothing unusual about the fits, which were of the major type, but headache was a prominent symptom not noticeable in the other two cases. There was no optic neuritis. Bromides relieved but did not quite stop the attacks. In December, 1906, more than two years later, he suddenly developed jaundice, with pale stools and bile in the urine. His liver then became palpable. Fortunately this symptom rapidly passed off, although I was quite prepared for a repetition of disaster. Naturally I am inclined to think that the anti-syphilitic treatment which I pushed then, combining mercury and iodide, helped recovery, although as this is the only case which I have to bring forward in support of this view, it must be left open to opinion, for it is, of course, possible that there was an intercurrent catarrhal jaundice. Later, in 1907, mercurial treatment was intermitted, and a fungating ulcer appeared on the right calf, which was thought to be the result of the bromide treatment. A return to mercurials promptly cured this ulcer. Since that time until the present date the most interesting feature to me has been the variable mental state. Waves of mental dulness seem to pass over the child, which, although possibly in part due to the bromides, are certainly not entirely a result of this drug. After he was twelve years I transferred him to University College Hospital, and continued steadily with the treatment. The result has been a really remarkable one; all the "fits" have long ago ceased, and his mental condition has steadily improved, so that now he is an intelligent if delicate-looking boy.

These cases occurred before the Wassermann reaction was known to us, but I think the evidence as to their nature is sufficiently convincing. They warn us not to forget that the reaction may be of some assistance in arriving at an early diagnosis of the underlying cause in these cases of epilepsy, and may, perhaps, prevent the

lamentable sequence of events that occurred in the two first I have described.

This short study of cases of jaundice brings home to us how far we are drifting now from the narrow channel of thought which was favoured by the conception of jaundice as due to a mere obstruction to the flow of bile. I readily admit that the lines in this article are drawn in with hardness, and that the future may soften them down where choluric and acholuric jaundice are concerned, but these cases, apart from this, are in themselves interesting ones.

A FATAL CASE OF WIDE-SPREAD ULCERATION LIMITED TO THE SMALL INTESTINE.*

By SIDNEY PHILLIPS, M.D., F.R.C.P.

*Senior Physician to St. Mary's Hospital and to the London Fever Hospital;
Physician to the Lock Hospital.*

A BOY had an attack of rheumatism at the age of seven, a second attack after scarlet fever when he was aged nine, and a third attack in November, 1911, when he was aged ten. On January the 4th, 1912, he began to suffer from acute abdominal pain and vomited everything he took. By medical advice he was kept in bed and given only hot water, and after forty-eight hours the vomiting ceased, but occasional paroxysms of abdominal pain continued; the bowels were opened daily, and no blood was ever passed. The boy's parents and five sisters and brothers were all healthy.

He was admitted into St. Mary's Hospital on January the 18th. He was a thin, pale boy; temperature normal. The abdomen was tumid, and there was deep tenderness in the umbilical region; no other sign of disease in any other organ could be discovered. On January the 25th and 26th he had slight recurrence of pain in the abdomen, but the temperature never rose above $99\cdot2^{\circ}$ F. He improved in general health and left the hospital on February the 8th; after that, while at home, he had occasional attacks of abdominal pain, and on May the 15th he got headache, and the pain in the abdomen became very severe, especially on the left side. There was no vomiting or diarrhœa.

He was re-admitted into hospital on May the 18th in a collapsed

* A paper read before the Medical Section of the Royal Society of Medicine on November the 26th, 1912.

condition, with feeble pulse and clammy sweats; the abdomen was tumid as before, but much more tender.

On the following day my colleague, Mr. Cope, opened the abdomen in the middle line. The appendix was swollen and there were a good many adhesions in its neighbourhood, which were freed, and the appendix was removed. The small intestine was noticed to be intensely gorged with blood. The patient died on the following day.

At the post-mortem examination by Dr. Spilsbury the peritoneum contained a little blood-stained fluid. The coils of the small intestine were a little distended, and were slightly glued together and to the abdominal wall by a small amount of recent plastic lymph; the small intestine for about the middle third was extremely congested on the outer surface and of a deep red colour, and there was a considerable amount of hæmorrhage into the mesentery under the peritoneal reflection; the congestion faded gradually away towards its upper limits. On the outer wall of the congested part were two or three small rounded areas of light yellow colour, with sharply defined margin; they had almost the appearance of infarcts; the peritoneum was not thickened over them. There was no thrombosis of the mesenteric vessels. On opening the small intestine its inner surface was seen to be intensely congested, and over large irregular areas was entirely denuded of mucous membrane, the submucous and muscular coats being exposed. The yellow areas noted above appeared as shallow ulcers, but except for this there were no solitary ulcers; above and below the congestion and ulceration became gradually less marked until they finally gave place to apparently healthy bowel about three inches above the cæcum. The large intestine was quite healthy. The other organs were healthy except for some old pleuritic and slight pericardial adhesions.

I have not been able to find in any medical or pathological work the record of any case in which were found such lesions as existed in this case, situate in and limited to the small intestine. The ulceration was quite unlike that arising from typhoid fever or tuberculous disease, or other known pathological causes of ulceration of the small intestine. The wide-spread denudation of the mucous membrane and destruction of the deeper tissues with irregular-shaped ulcers exactly resembled the condition seen in some cases of acute ulcerative colitis. The causation of the disease is unexplained; but there is evidence that colitis may sometimes result from articles of food ingested—perhaps frozen or otherwise preserved—and it is possible that this case, in which the small intestine alone was affected, arose from a similar cause. There is nothing against this

in the fact that in colitis the large intestine, and in this case the small intestine, was affected, for certain poisons have selective actions on different parts of the alimentary canal; thus corrosive sublimate produces acute inflammation of the large intestine, and tartar emetic poisoning leads to intense inflammatory conditions in the small intestine. Indeed, though the possibility of the present case having resulted from administration of tartar emetic was out of the question, the symptoms that occurred and the lesions found post mortem were more like those arising from tartar emetic poisoning than anything else. When the case first came under my observation the only symptoms were pain and tumidity of the abdomen, and it resembled a case of tuberculous abdominal disease. On the second admission to hospital the boy was in a state of extreme collapse with distension of abdomen, and the possibility of perforation was entertained.

HYSTERICAL PHOBIA IN A CHILD; THE PRINCIPLES OF THE TREATMENT.

By TOM A. WILLIAMS, M.B., C.M.Edin.,

Washington D.C.,

Membre Corresp. Soc. de Neurol. de Paris; Membre Corresp. Soc. de Psychol. de Paris; Neurologist to Epiphany Free Dispensary, etc.

A BOY, aged 8 years, was seen with Dr. A. R. Tynes, at Staunton, Virginia, in the autumn of 1911. The preceding May he had developed what his parents called hallucinations, which only occurred when he was alone, for he would go errands and play about if he knew he was in sight of anyone at all. There were no night-terrors, although he feared going to bed alone, and his mother or father always accompanied him upstairs. Whenever he was alone a spell would occur. The hallucinations were accompanied by a loud cry and a twisting backwards of the neck and contortion of the body. He was rarely still, wriggling about nearly all the time in an excitable fashion. His father and maternal uncle are declared to have had similar attacks in childhood. But it could not be ascertained that the parents had not spoken of some of these before the boy. The mother was over-anxious, "hysterical," and very uneasy when the boy was out of her sight, of which the boy was well aware.

Examination revealed no physical signs of disease of the nervous or any other system. In anamnesis I found him a sensible little fellow, and I ascertained that it was a snake which he usually saw,

although sometimes a wild beast would be seen. His shout was really the name of the animal he saw. He could not describe the snake except to say its head was like an eel. He remembered well the first such occasion of fright, and the creature then was not a snake but a rooster. He declared that he was never actually afraid of any animals. Indeed, on one occasion, wearing a red sweater, he chased a bull away with stones. On another occasion he went into the cellar to look for the bogey-man. He said that his only fear was that of being whipped by his father when he was naughty, and that of this he was "not very frightened."

I could not, in the short time at my disposal, penetrate the psychogenesis completely. My questions soon showed that the hallucinations were not true ones, for when I asked the boy if when he looked round there was really an animal jumping on his shoulders, he had to reply "No"; and that he never actually saw, heard, or felt what he feared. He then spontaneously declared, "I reckon my imagination gets away with me." I then asked him, "Why do you look round each time you fear the animal behind you?" He said, "It does not give me time to think of it; it comes so quickly sometimes, and I shout and run before I can recover myself." When asked, however, he said he was not easily startled as a rule.

Diagnosis and prognosis.—Familiarity with the mechanism of terrors of children enables one to interpret this boy's case as a phobia against being alone, produced by the foolish anxiety of his mother. This affective state was an induced one therefore, produced by the idea of some "dreadful consequences" which might occur to a little boy when not protected by his elders. But the morbid reaction had become a habit, so that even though the initial cause were suppressed, training would be required to overcome the facile inductibility of the terrors. Inhibition of his undue impulsivity should also be undertaken.

Treatment.—Accordingly, the following procedures were outlined, and the reason for them clearly explained to the boy and his father. First, he must gradually accustom himself to go out alone, first for half a block, then for a whole block, and finally round the corner. While doing this, he could hold himself in hand, his attention fully awake to the need of manly behaviour and the importance of recovering from his timidity. Secondly, he must learn to go to sleep without anyone else in the room, remembering what a nuisance a boy is who cannot forego keeping one of his parents constantly at home in the evening. Thirdly, he was shown exercises in slow movement and mobilisation by which he could suppress the wriggling

tendencies of his limbs and body. His mother should be dealt with rationally also.

Wishing to obtain more precision as to the psychic mechanism, I wrote to the boy asking him to tell me whether he seemed to be in a dream-like or in an absent condition when the fears assailed him. I also, of course, wished to stimulate the practice of the re-educative precedures I had prescribed. The following reply was made, and I recently heard from Dr. Tynes that the boy remains well.

"Dear Doctor,—I have your letter, I do not see any animals since I saw you. I never did hear or feel them, but used to see them. It is not like a dream. I hope I can soon write you I am well. Your little friend."

I heard from the father of the little boy that he undresses and goes to bed alone, and is getting a good hold over himself.

The diagnosis of hysteria.—The mode of treatment of which the case is an example must be founded upon an accurate diagnosis, more especially where organic or functional disease is present in addition to hysteria. Indiscriminate use of persuasion, however rational, will bring only discredit to the physician who employs it. The most careful discrimination is required in some cases to differentiate that portion of a syndrome which is psychogenic. And where organic disease of the nervous system is what is simulated, an exact and wide knowledge of neurological signs is essential for a correct diagnosis. For, although hysteria may resemble apparently closely the condition produced by an organic or functional disease, differences always exist, which can be detected, however, only by one versed in minutiae of clinical neurology. For certain aspects of these, reference may be made to the writings of Babinski and his followers, and to the author's "Nature of Hysteria," 'International Clinics,' 1908, iii, p. 44; "Simulation of Hysteria," 'Amer. Journ. Insanity,' 1910, lxi, p. 287; "Reflexes in Hysteria," 'Month. Cyclop.,' 1910, xiii, p. 346; "Essential Differences of Hysteria and Psychasthenia," 'New Orleans Med. and Surg. Journ.,' 1909, lxi, p. 959; "Hysteria and Pseudo-Hysteria," 'Amer. Journ. Med. Sci.,' 1910, cxi, p. 378.

Therapeutic means.—The methods which have been used to attack hysterical fixed ideas may be divided into the following four categories:

(1) *Mystical impressions.*—This has been used in all ages with powerful effect even upon those who are ostensibly among the most highly educated. A consideration of the mechanism of this method would lead me too far in what is a practical therapeutic presentation.

(2) *Suggestion, direct or indirect, whether in hypnosis or not.*—This method is a very crude one, and merely aims at removing a symptom by side-tracking it, and using a mental mechanism quite similar to that which has caused the symptom. It is as short-sighted as the giving of morphine for the pains of appendicitis; for it merely masks and thus perpetuates a condition at the root of the trouble. Moreover it often fails to remove the symptoms against which it is aimed—a fact beautifully illustrated by cases. When successful it is often only fugitive, and the relapses are tenacious.

(3) *Emotional appeal.*—It is uncertain if this measure, in its purity at least, is ever the effective force in the transformation of a hysterical symptom, for it is impossible to divorce it from the ideational element, upon which it must always rest, even in the most primitive beings. Many psycho-pathologists believe the contrary, because of the fact that cold intelligence is powerless in therapeutics, and requires for a dynamic result the affective constituent needed for conation. But a little reflection makes it clear that the affect is, so to speak, only the background of the idea, and that the act or thought (for they are the same psychologically) which ensues upon psycho-therapeutic intervention takes its direction from the idea by which it can be differentiated from other ideas, of like affective quality, but very different in their effects in accordance with the difference of the controlling idea they present.

For instance: A good example was the cessation of a young woman's infatuation for her lover as soon as the idea of his handsome attractiveness was substituted by Professor Janet by the idea that he was repulsive. This was accomplished by suggestion that she would be unable in the future to picture her lover's face except in the form of that of a pig. Here the affective difference towards this man was not produced by direct emotional appeal, but resulted purely from a change of ideas.

Another instance on a large scale is the transformation of many a man's normal affection towards women into a loathing for her on account of the teaching of the church that she is unclean. The efficient factor in this transformation is the idea. The men still have the same feelings, but they are perverted from their proper end towards an ideal by a conceptual difference not essentially affective. Business morals, too, afford instructive examples.

(4) *Rational persuasion, comprising enlightenment and re-education, motor, sensory and psychic.*—Although psycho-analysis of the whole of a patient's life is very rarely required, as cases clearly show, yet it can be spared only in proportion as the investigator possesses (1)

the diagnostic differentia of nervous disorder, (2) knowledge of psycho-pathology, and (3) finesse in anamnesis.

Even if the pathogenetic factor is not found by these means, yet reconstruction of the patient's attitude can be begun. In many cases this is best accomplished by the patient's own physician, but there are some patients who require the frequent adaptations only possible to a psycho-therapeutic technician of experience.

It would require far too much space to give therapeutic details or even principles here, although it is unfortunate that there is, so far, no clear and succinct presentation of the subject. (A short presentation was made to the Neurological Section of the American Medical Association, *vide* 'Journ. Amer. Med. Assoc.,' 1912, lix, p. 2224.) However, most psycho-therapeutic literature is concerned with what is really hysteria, although it is often presented under other names.

The most important essential of the successful therapist is that he thinks not in artificial categories, but in terms of dynamogenesis, and this not only as regards the source of the patient's hysteria, but equally so as regards the means of disencumbrance to be used. No treatment should be attempted until a clear diagnosis is made. The patient's co-operation should be enlisted from the first, even although full enlightenment may not be expedient at the beginning. But, of course, strong meat is not for babes, and the dose of psychology must be strictly adapted to the understanding of the sick one.

After all, psycho-therapy is merely a combination of special knowledge with good sense and honest purpose. Until these qualities are more common or more readily available, a large number of hysterics will continue to drift from the physician by whom they are not relieved to the faith healer and other charlatans, whose suggestions they in turn undergo with little more benefit on the whole; for the temporary relief they so often obtain is usually at the cost of an increased hysterisability, which is certain to show itself later, if not in symptoms of physical appearance, at least in psychological instabilities most detrimental to the society in which they live. Hence, it behoves the medical profession to instruct the coming generation in the psychological principles which are the groundwork of a prophylaxis and therapeusis of the most prevalent of all human tendencies—hysterisability.

CONGENITAL RENAL AND URETERAL ANOMALY *

By J. D. ROLLESTON, M.D.

Assistant Medical Officer, Grove Fever Hospital, London.

THE anomaly to be described was found at the necropsy of a boy, aged 12 years, who died on November the 8th, 1912, from generalised paralysis following very severe faucial and nasal diphtheria on the forty-seventh day of disease.

The amount of urine passed during the first eighteen days ranged from 21 oz. to 37 oz. in the twenty-four hours. Albumin was present in the urine from the third to the thirty-eighth day.

The necropsy, which was held on the day after death, showed hypostatic congestion of both lungs, thickening of the left ventricle and dilatation of the right ventricle. Examination of the abdominal cavity showed that the right kidney was absent, together with the corresponding renal artery and vein and suprarenal. The right ureter, however, was present, and extended upwards from the bladder to the mid-lumbar region, where it ended blindly. It measured 5 in. in length. The left kidney was situated in the usual position and was considerably enlarged, being $4\frac{3}{4}$ in. long, 2 in. broad, $1\frac{1}{2}$ in. thick, and 6 oz. in weight—practically the measurements of the adult organ. There was partial duplication of the ureter, the upper branch, 4 in. long, supplying the upper third, and the lower branch, $3\frac{1}{2}$ in. long, supplying the lower two thirds of the kidney. The branches united 3 in. from the bladder at the brim of the pelvis. On opening the bladder the right and left ureteral orifices were seen to be of the same size. The patency of the right ureter was proved by the readiness with which a platinum culture needle could be passed from the vesical orifice to the blind upper extremity.

There were no congenital abnormalities of the genital, circulatory or other systems.

It is a well-known fact that there are no symptoms peculiar to single kidney, which in this case, as in most of those on record, was a necropsy surprise.

The abundant and persistent albuminuria was such as is usually found in malignant diphtheria. The amount of urine was measured during the first three weeks of the disease, merely to serve as a guide to prognosis, a marked diminution in the urine during the

* Specimens of the cases were shown at the Children's Section of the Royal Society of Medicine on January the 24th, 1913, and are now in the Museum of the Royal College of Surgeons.

acute stage of diphtheria being of bad omen. There was no oliguria in the present case, the single kidney being perfectly able to do the work of two.

Whether the violent attacks of abdominal pain were associated with the abnormal condition of the kidney or ureter I am unable to say. There was no evidence, however, of any calculus, to which single kidney seems to be unusually predisposed (Morris).



Renal and ureteral anomaly. (From a drawing by M. E. Waring.)

It is interesting to note that the blood-pressure, which had fallen from 100 mm. on the third day of disease to 80 mm. on the ninth, rose with the onset of late paralysis to 110 mm. on the thirty-seventh day, and on the day before death to 120 mm. and 130 mm. This rise of blood-pressure was probably not connected with the renal condition, but was such as often occurs in late diphtheritic paralysis, and was possibly due, as I have suggested elsewhere, to an irritative condition of the vaso-motor centres in the medulla, in which the other nerves have undergone a varying degree of paralysis.

The case is one of unusual interest from the anatomical, medical and surgical standpoints. As far as I have been able to ascertain from a study of the literature, no other cases have been recorded of asymmetrical kidney with partial duplication of its ureter co-existing with a patent ureter on the side on which the kidney is absent. The condition of single or asymmetrical kidney is by no means common, being found, according to Morris, in only one out of 2400 autopsies; 213 were collected from literature by Ballowitz in 1895, 286 by Anders in 1910, and 300 by Dorland in 1911. Probably these figures are too large, some of the cases, especially those recorded by the earlier writers, being examples of fused and not of single kidney.

The congenital absence of the kidney is due to failure of the Wolffian duct to throw off the corresponding renal bud after the duct has reached the cloaca.

Duplication of the ureter, which is usually incomplete, as in my case, is not so very uncommon, being found in 1 to 2 per cent. of all corpses (Lessing). The association of single kidney with complete or partial duplication of the ureter, though uncommon, is not unique, cases having been recorded by Morgagni, Blaise, Rufz, Laroche and Gérard. The last authority regards the association of double ureter with single kidney as a pure coincidence. The presence of a ureter on the side on which the kidney is absent is very exceptional. Out of 286 cases of single kidney collected by Anders, there were only 24 in which a more or less rudimentary ureter was present on the side on which the kidney was absent. In the majority of these the ureter was impervious, and I have been able to find only six other cases besides my own in which the ureter was patent throughout its entire length (Haberer, Hallopeau, Horand, Nelson, Paulicki, Winter).

The medical interest of single kidney lies in the frequency with which the organ is liable to disease. According to Anders, 79 out of a total of 170 cases or 46.5 per cent. in which renal lesions were recorded showed morbid changes, and 42.3 per cent. some form of chronic nephritis. The outlook in these cases is less hopeful than when both kidneys are present.

The surgical importance of single kidney is impossible to over-estimate. The present case shows how important it is before operating on the kidney to ascertain not only whether there are two ureteral orifices but also whether urine escapes from both—in other words, not only is cystoscopy necessary, but also catheterisation of the ureters. The partial duplication of the ureter adds a further

difficulty. In catheterisation of the kidney collection of urine from the upper or lower branch respectively would give an erroneous idea as to the functional value of the organ. At present no instrument has been invented to detect this anomaly (Jeanney). In Maucclair and Séjournet's case the upper two-thirds was served by one ureter and the lower one-third by the other, while in Jeanney's case, as in my own, the upper one-third of the kidney was supplied by the upper branch, and the lower two-thirds by the lower branch of the double ureter.

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Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, February the 28th, 1913.

Mr. A. H. TUBBY, *President, in the Chair.*

Slight Congenital Deformity of the Hands in a Child.—Dr. F. PARKES WEBER.—The deformity consisted in partial flexion of the fingers at the metacarpophalangeal joints. The child could use his hand fairly well to grasp with, but could not completely extend any of the fingers except the left index finger. Both the little fingers could, however, be *passively* completely extended. In some spontaneous positions of the hand slight ulnar

deflexion of the fingers was likewise noticeable. The patient, a boy, aged 17 months, was born at full term, easily without instrumental help. He was the only child of healthy parents, who were both young. The mother had had one miscarriage before the child was born. There was no history of any similar deformity in the family, nor was there any special family tendency to arthritic affections. The child had a little convergent squint, and possibly slight hydrocephalus. He likewise presented some rachitic "beading" of the ribs, but otherwise appeared well developed and mentally normal. The position of the hands at first suggested the carpopedal contractions in tetany, but the child had no facial irritability, and nothing else which would in the slightest degree suggest tetany. The feet and toes were quite normal in shape and position. Since the child was two months old the mother had practised a kind of massage with passive movements for his hands, and thought that he could use his fingers better as a result of her treatment. Skiagrams of the hands showed nothing special. There seemed to be no disease in the joints. Dr. Weber had not heard of any exactly similar case. The fault seemed to lie chiefly in the muscles which extended the first phalanges.

In the discussion which followed, the PRESIDENT expressed the opinion that the condition was due to congenital tightness of the palmar fascia.

Infantilism due to Mitral Stenosis.—Dr. F. PARKES WEBER.—The patient, a girl, aged 15 years, had the stature and appearance of a girl of ten.

A Case of a Mongoloid Child.—Dr. F. G. CROOKSHANK.—The boy was a Mongoloid of undoubted European parentage, in whom ethnic characters, conforming to a type of racial Mongolism, were well marked without the coincidence of any trace of rickets, tuberculosis, syphilis, dysthyroidism, or other disturbing factor. There was no coarse bodily or mental defect, and such features as the fissured tongue and the orangoid ear, so common in Mongoloids of the lower grades, were absent. But some traits were present that were simian or orangoid. The child, aged 5 years, was the younger of two sons born to a father who was aged 38 years and a mother who was aged 28 years. The elder brother, aged 7 years, was thin and nervous. The patient himself had a yellow skin and dark hair, though his mother stated that at birth he was "almost black." His hair was fine, his eye-focus of a characteristic form (though the eyes were not "oblique"), and his profile was distinctly Chinese. The head, as in a certain proportion of Mongoloids, especially of higher grade, was well developed occipitally. The lips were extraordinarily plastic, and the boy, when in the mood, would project them in trumpet form and hoot in imitation of a motor-car, producing noises precisely like those emitted by anthropoid apes. In both jaws the canine teeth were markedly long and tusk-like. The lower incisors were small, and the lateral incisors in the upper jaw were notably smaller than those which were central. The testicles were small and probably descended late. He had what had been called a "high pelvis," the crests of the ilia appearing to rise high in the loins, so that the folds of the groins included a more acute angle than usual. He was highly estimated by his comrades as a contortionist.

Mongolism in a Baby aged 3 months.—Dr. EDMUND CAUTLEY.

Two Cases of Congenital Coalescence of Radius and Ulna.—Mr. J. E. ADAMS showed two children in the same family in whom deformity had

been noticed from birth. Both forearms were held in a position of pronation, and although there was movement at the inferior radio-ulnar articulation, supination was almost absent. There was a forward and outward curve in the shaft of the radius. Skiagraphy had shown that the radius was fused with the ulna a short distance below its head, and the deformity was the same in both forearms and in both children. By the kindness of Mr. S. G. Shattock he was enabled to show a specimen from the museum of St. Thomas's Hospital which illustrated precisely the same deformity. A similar case had been described by Dawson ('Brit. Med. Journ., 1912, ii, p. 833).

The PRESIDENT and Mr. E. LAMING EVANS, speaking from observation on a similar case, advised against operative measures.

Lymphangioma of the Axilla.—Mr. DOUGLAS DREW.—A baby aged 9 months was admitted to hospital with a large, soft, lobulated tumour of the axilla. The tumour occupied the whole axillary space extending up to the clavicle, and required an extensive dissection for its removal, as it surrounded the vessels and nerves. In order to facilitate this the pectoralis minor was removed with the tumour.

Cicatricial Contraction of the Thumb following a Burn about eighteen months previously.—Mr. DREW. —Skiagrams showed the thumb drawn back and bound down to the wrist by dense fibrous tissue. After dividing the contracted tissue and liberating the thumb the raw surface was covered by a large flap cut from the back of the hand.

Separated Epiphysis of the Femur Treated by Plating.—Mr. DREW. —The operation was performed on December the 9th, 1909. The child had been temporarily lost sight of, and was exhibited because the plate had not been removed. A skiagram showed that in the process of growth the screw in the epiphysis had been gradually drawn out; there was no shortening of the limb, and the movements were free. As the plate caused no inconvenience and was not hindering growth it did not appear necessary to remove it.

Costo-transversectomy: Spinal Caries and Mediastinal Abscess.—Mr. EDRED M. CORNER.—A boy, aged 6 years and 5 months, was admitted to hospital on December the 6th, 1909. On admission there was some kyphosis in the lower dorsal vertebræ, with indications of abscess formation on the left side at the level of the eighth dorsal vertebra. Skiagram (November the 30th, 1909) showed the existence of a large mediastinal abscess in front of the lower dorsal vertebræ. Costo-transversectomy was done on December the 14th, 1909, the abscess being opened and drained on the left of the spinal column at the level of the eighth dorsal vertebra. A skiagram (December the 29th, 1909) showed the abscess cavity and some destruction of the ninth and tenth dorsal vertebræ especially in the transverse processes of the left side and in the heads of the corresponding ribs. By two operations, on February the 18th and March the 16th, 1910, the abscess cavity was scraped. On May the 17th, the heads of the ninth and tenth ribs on the left side were excised. A skiagram (July the 8th) showed no indication of abscess cavity remaining; there was formation of new bone in the damaged ribs. On November the 22nd, 1910, a sinus was scraped. On February the 28th, 1911, the patient was sent to a convalescent home in a Phelps's box, still having a small sinus. He was readmitted on October the 1st, 1912. On October the 3rd, 1912, an emulsion of bismuth and iodoform

was injected into the sinus. A skiagram showed a small cavity containing bismuth and considerable destruction in lower dorsal vertebræ, especially the eighth, ninth, and tenth. The sinus gradually closed after the injection. When exhibited the patient had a marked but not extreme degree of kyphosis in the lower dorsal region. On the left of the spine at the level of the ninth dorsal vertebra there was a depression marking the position of the old sinus, which had healed. A skiagram (February the 10th) showed no abscess formation, but there was destruction of the bodies of the lower dorsal vertebræ, especially the ninth and tenth.

Congenital Absence of Fibula, Deformity of Tarsus, and Absence of Toe.—Mr. CORNER.—The patient was a baby, and presented the appearance characteristic of the condition. A skiagram showed the absence of the fibula. The tibia was bowed sharply and seemed shorter than the other. The summit of the convexity of the tibia was sharp and presented a groove or dimple over it. The movements of the ankle-joint were somewhat restricted. Apparently the fifth toe was absent. The doctor who first saw the patient diagnosed an intra-uterine fracture which had united. The absence of the toe led to the correct diagnosis, confirmed by the skiagram, of "congenital deformity of leg." In addition the skiagram demonstrated the characters of the deformity: absence of fibula, one centre of ossification representing both the astragalus and calcaneum, absence of the fifth toe and its metacarpal.

Chronic Albuminuria with Hepatic Enlargement.—Dr. CAUTLEY showed a girl, aged 8 years and 2 months, the daughter of healthy parents, but whose grandparent and great grandparent were said to have died from phthisis. She had had measles, varicella, mumps and pertussis. During 1910 she was an in-patient at another hospital for four months for albuminuria. Later on a gland was excised from the left side of the neck, and tonsils and adenoids were removed. From June the 20th to July the 8th, 1911, she was admitted to the Belgrave Hospital for bronchitis, albuminuria, and right otorrhœa. Two months before this she had had pneumonia, bronchitis and measles. The attack of bronchitis subsided quickly. Her urine contained much albumin but no casts. A year later she was again admitted for bronchitis and the urine was found to contain a fairly dense cloud of albumin. In November last she was admitted for prolapsus recti. When exhibited she had been an in-patient since January the 28th for an attack of bronchitis and anasarca. The face and legs had been moderately swollen for four days. The liver extended 2 in. below the ribs and the spleen was palpable, the abdomen being considerably distended, though there was no dulness in the flanks. The urine contained 0.2 to 0.7 per cent. albumin. A centrifugalised specimen on February the 12th showed many white cells, several granular and hyaline and a few epithelial casts. The total daily amount of urine varied greatly—*e.g.* 12, 22, 30, and 13 oz. on successive days. Von Pirquet's reaction was negative and there was no reason to suspect syphilis. The case was shown with a view of eliciting opinions as to the nature of the albuminuria, the causation of the hepatic enlargement, and the probable prognosis.

Summer Diarrhœa and Summer Heat.—Dr. H. CHARLES CAMERON read a paper, in which he emphasised the importance of temperature and environment as direct causes of summer diarrhœa, in contra-distinction to infection.

Philadelphia Pediatric Society.

January the 14th, 1913, THEODORE LE BOUTILLIER, M.D., President.

Urticaria.—Dr. ELEANOR C. JONES showed a boy, aged $2\frac{1}{2}$ years, with urticaria pigmentosa. The primary lesions were those of urticaria, and appeared at the age of two and a half weeks. They promptly disappeared and then reappeared, commingled with bullæ which desiccated and were covered with crusts. Finally the lesions became pigmented. There had never been itching. The entire cutaneous surface is now covered with brown lesions, papular in character, varying in size and shape from small rounded or irregular oval to large confluent patches. The eruption, while most marked on back, chest and abdomen, extends to palms and soles and may be noted on the penis and ears. Wassermann reaction was negative. Staining a section of the skin showed mast-cells in the corium. As these are characteristic of the disease their presence confirms the diagnosis. The child is anæmic, suffering from intestinal indigestion. The urine until recently has showed indican in large quantities. No successful treatment has yet been found, as the patches seem to fade out about the age of adolescence.

Dr. JONES also presented a case of urticaria factitia, dermatographic urticaria, in a girl, aged 8 years. She belongs to a neurotic family and is herself very nervous.

A Case for Diagnosis.—Dr. S. McC. HAMILL showed a case, the diagnosis of which had been tuberculous meningitis. All the symptoms usually found in this condition were present, but four separate examinations of the cerebro-spinal fluid showed nothing abnormal. The child had been ill two weeks before admission and grew more ill during the next ten days, when his condition was alarming. Improvement began after the fourth spinal puncture, when 20 c.c. were removed. There was no pressure, however. At the height of the illness there were complete ptosis of the left eyelid, partial paralysis of right side of face, general rigidity, marked retraction of head, irregular Kernig's sign, intermittent exaggeration of the knee-jerk and Babinski's sign. Von Pirquet and Wassermann reaction were negative. When the patient was shown, six weeks after the onset, recovery was complete, except for slight drooping of the left eyelid.

The Bacteriology of Diphtheria.—Dr. KOLMER read part of the Pediatric Society Prize Essay for which he was awarded one hundred dollars. He attempted to differentiate among the various types of diphtheria bacilli, and especially between the pseudo-diphtheria and true diphtheria bacilli, by complement-fixation reactions. Immune serums were produced in rabbits by eight different strains and tried out with homologous antigens. The various serums and antigens were then interchanged. The results indicated on the whole that such differentiation between the members of the group was not decided. Similar experiments with raw diphtheria antitoxin obtained soon after bleeding showed no relation between the degree of complement fixation and antitoxin content. The results of the work indicated that Hoffmann's bacillus belongs essentially to the diphtheria group and is not a separate entity in the sense of being totally unrelated. It is probable that this

bacillus is an example of "mutation," and is capable of transmitting its new qualities through an indefinite number of generations. The types of bacilli were studied and recorded in 253 cases of diphtheria. The granular varieties were found to predominate in the largest proportion of cases of clinical diphtheria whether the disease be located in the nose, pharynx or larynx. Cultures of these cases were also studied in reference to changeability of types during the course of the disease. The results of 237 animal inoculation tests were also given. It was found that the granular types gave the highest percentage of positive tests. No matter how long they persist in the throat after recovery, they should be regarded as dangerous until proven otherwise. The value of animal inoculation tests was especially appreciable when dealing with solid types of bacilli when these persist in the tissues over a long period of time or when found in contact and carrier cases. Acid-production tests were conducted with sixty-two strains. Dr. Kolmer advocates the following scheme, modified from after Westbrook, for the bacteriological diagnosis and management of diphtheria. (1) Hold the granular types, A, B, C, D and E as significant, regardless of the clinical condition or history of the patients or the presence or absence of other types. Cultures of these types from carriers or from persons running a prolonged list of positive cultures should be tested for virulence. (2) Regard the barred types, A₁, B₁, C₁ and D₁ as doubtful unless granular bacilli are also present, when a positive diagnosis is given. (3) Hold the solid types, A₂, B₂, C₂ and D₂ as doubtful and request another culture. If granular bacilli are present, a positive diagnosis is given. If subsequent cultures show the same solid types and if the patient is free from clinical evidence, they may be regarded as negligible. It is in dealing with these types that we feel the greatest need for clinical co-operation, because clinical diphtheria may in exceptional instances be caused by these bacilli although in the majority of cases the D₂ type is a negligible organism. (4) Regard E₁, E₂, F, G, F₁ and F₂ as negligible. (5) Test the virulence of all cultures of solid types of bacilli after the patient has recovered and is being quarantined over a long period of time by positive cultures. These inoculation tests are especially indicated with cultures from the nose or ear. If the above method is employed by the bacteriologist and if three successive negative cultures are required instead of two before the termination of quarantine combined with the judicious use of the animal inoculation test in suitable cases, the bacteriological diagnosis and management of diphtheria will be efficient and satisfactory to all.

The Wet-Nursing of Foundlings.—Dr. W. ESTELL LEE.—The object of the Children's Aid Society of Pennsylvania is to give to homeless and neglected children a home with private families in the country districts of the state.

The simplest form of such a problem is the placing of a normal child of a working age, and this can usually be done without the payment of board by the Society. But physical defects, sickness and a decreasing age increase the difficulties and expense to such a degree that it was impossible, before this year, for the Society to accept the extreme type of dependency, the sick infant. The unusual expense and high mortality of the work with sick infants resulted in the Society refusing to receive them, and they remained in the maternities, foundling asylums and almshouse.

The suggestion was made to the Society that our mortality with these infants would be lessened by providing them with wet-nurses. After several conferences with the institutions and physicians of the city it was decided

that the prohibitive expense of wet-nursing might be decreased by the establishment of a bureau of wet-nursing.

The bureau consisted of one of the agents of the Society, a trained social worker, of the office force and equipment of the Society for the keeping of records, of the physician nurses, examining rooms, shelter and organisation of the medical department of the joint receiving shelter.

The wet-nurses were obtained by advertising in the daily newspapers, by personal visits to the maternity hospitals and other institutions, and by letters to the physicians and Board of Health making them familiar with the bureau and the possibility of employment for nursing mothers.

During the last nine months 153 women applied to the bureau, but only 41 of them were accepted.

Upon the receipt of an application a personal visit was made by the agent of the bureau and a thorough investigation made of the social and sanitary conditions of the home. Sixty-three of the applicants were rejected because of the impossible conditions in the homes. Eleven withdrew before investigation and 38 refused to be examined by the physician. If the applicant received the approval of the investigating agent she then received a thorough physical examination by the physician. This examination included a Wassermann test of the blood and a von Pirquet tuberculin test. Fifteen of these women were rejected by the physician and three of them because of positive Wassermann reactions. The infants received the same thorough physical examinations, and it will be of interest to know that three infants were refused because of positive Wassermann reactions.

Of the thirty-one babies received for wet-nursing, three died, all within one week after being received by the Society. One of the children refused to nurse and was returned to the Philadelphia Hospital. Two of them, after showing marked improvement during the first three months, developed acute gastro-enteritis during July. Both of these cases were nursed by the same Italian woman, and no doubt were the direct result of the unhygienic conditions in that home. They were sent to the Wynnefield Hospital, where they recovered, and are now placed in permanent country homes and being artificially fed. Two infants developed acute œdema. One was due to nephritis, which was treated at the Children's Hospital, the child recovering.

While at the Children's Hospital this child was wet-nursed. The other case of œdema was of unknown origin; after ten days in the Philadelphia Hospital he recovered and is now being wet-nursed. The remaining twenty-three children all developed into normal healthy infants. Eight of them have been weaned, placed upon artificial food and sent to permanent country homes.

Not the least of the difficulties of such a problem is that of cost. At first the fees asked by the women were impossible, some asking as much as fifty dollars a week. And of the 41 nurses accepted, fifteen withdrew because we could not give them the amount asked. But the fictitious character of such fees is shown by the amounts which were paid; thus—

	\$
The minimum boarding rate per week	2.50
The maximum	6.00
The average	3.52

But with the organisation of the Children's Aid Society, a trained worker and a working medical organisation of the Joint Receiving Shelter, the expense of such an undertaking was materially lessened.

Cost of Wet-Nursing Department.

	\$
(1) Total medical expenditure	52.27
(2) „ visiting nurse expenditure	238.40
(3) „ advertising	87.48
(4) „ cost of trained agent	525.00
(5) „ cost of incidentals, photos	17.00
(6) „ transportation	292.30
(7) „ board for babies	1325.08
Total	\$2538.53

Cost per week.

	\$
(1) Average boarding rate per child	3.52
(2) „ overhead cost „ „	3.02
Average cost per week per child	\$6.54

Société de Pédiatrie, Paris.*December the 10th, 1912. (Bulletin No. 9.)*

X Rays in Hypertrophy of Thymus.—MM. H. GRENET and SÉDILLOT reported this case. In spite of brilliant successes X rays are sometimes inefficacious, and are then a source of danger, valuable time being lost. Unless improvement under their use is immediate and rapid, surgical intervention should not be delayed.

Case of Vinous Hepatic Cirrhosis in a Child of 8 years.—MM. G. VARIOT and CAILLIAU.—This case was one of atrophic cirrhosis due to the exclusive use of wine. Lancereaux described this affection, which corresponded to Laënnec's sclerosis or proliferative sclerous hepatitis, and differentiated the degenerative hepatitis due to alcohol with which it is confused by modern authors, and drew attention to the fact that, unlike this form, vinous cirrhosis is accompanied by hypertrophy of the spleen and venous collateral circulation and often by albuminuria. There is also a disposition to pulmonary tubercle at the right posterior apex.

Scarlatinal Encephalopathy.—MM. H. MÉRY, H. SALIN and A. WILBORTS.—A girl, aged 7 years, admitted for scarlatina which developed normally, was seized with total blindness, meningeal symptoms and slight transient albuminuria. Contractures, nuchal rigidity and Kernig's sign were absent. Cerebro-spinal fluid was very clear, albuminous, and showed slight lymphocytosis. Urea per litre 0.53 gr. On a water diet and bleeding complete recovery ensued.

Curious Case of Nerve Congenital Syphilis.—MM. TERRIEN, BABON-NEIX and DAUTRELLE.—The patient was a male child, aged 17 months,

admitted for optic neuritis. For ten months he had suffered from general muscular atony with disturbance of electrical reactions. Woodcuts are given in the 'Bulletin' illustrative of the condition. The speakers discussed the diagnosis between the syphilitic pseudo-paralysis, infantile paralysis and Oppenheim's congenital muscular atony.

Pulmonary Complications of Scarlatina: (1) Multiple Abscesses of the Lungs and Pyo-pneumothorax; (2) Pulmonary Infarct.—M. RÉNÉ PORAK.

Hæmorrhagic Broncho-pneumonia, with Gangrenous Ulceration of Intestines and Acute peritonitis.—M. RÉNÉ PORAK.

A Simple Method of Respiratory Exercises.—M. PESCHER.

Case of Myopathy: Leyden-Mæbius type.—MM. H. GRENET and ROUSSELOT showed a child, aged $9\frac{1}{2}$ years, with considerable atrophy of the thigh muscles, a slight degree of pseudo-hypertrophy of the calf, atrophy of the muscles of the upper extremity, slight thoracic deformity and a myopathic facies. The disease had been progressive, and there was now complete paralysis of the legs. The symptoms contra-indicated a spinal cord or nerve affection, and the authors considered it a primary myopathy of the Leyden-Mæbius type, which differed from that of Duchenne in the absence of pseudo-hypertrophy. There was no evidence that the affection was familial.

VINCENT DICKINSON.

Abstracts from Current Literature.

Medicine.

Tuberculosis in children ('*Norsk Mag. f. Lægevid.*,' 1913, LXXIV, p. 1). —F. Harbitz.—Among 484 necropsies performed at the Rikshospital, in Christiania, on children aged from 0 to 15 years between 1898 and 1911, 286 cases, or 59 per cent., were free of tuberculosis, and 198, or 41 per cent., showed signs of tuberculosis. Of the latter 119 had died of tuberculosis, in 52 tuberculosis was latent or obsolete, and in 27 the process was latent but a positive culture was obtained. In about 65 per cent. the primary lesion was in the respiratory tract, in 15 per cent. in the lymph-glands, in 10 per cent. in the digestive tract, and in 10 per cent. it was doubtful whether the process had started in the respiratory or digestive system. The percentage of tuberculous infection was 20 in the first year, 26 in the second, 31 in the third, 33 in the fourth, 56 in the fifth, 80 in the sixth, 46 in the seventh, 65 in the eighth, 67 in the ninth, 73 in the tenth, 93 in the eleventh, 69 in the twelfth and thirteenth, 92 in the fourteenth, and 80 in the fifteenth. Illustrative cases are recorded, including the following one of congenital tuberculosis. The child died twenty-five days after birth with symptoms of lung disease. Post mortem the lungs were found studded with small infiltrations, the size of a hemp-seed. Microscopical examination showed the existence of caseous pneumonia. The caseous nodules were

filled with tubercle bacilli. At the necropsy of the mother, who died three days after the child, in addition to chronic pulmonary tuberculosis, general miliary tuberculosis and tuberculous infection of the endometrium at the placental site were found.

J. D. ROLLESTON.

Tuberculosis in infancy and childhood, and preventive medicine (*'Brit. Med. Journ.,'* 1912, II, p. 677).—**C. McNeil** gives a series of 371 cases in which cutaneous tuberculin tests were made on in-patients of the Royal Edinburgh Hospital for Sick Children, including cases of active and recognised tuberculous disease. These were arranged in six age-groups, so as to admit of comparison with corresponding figures given by von Pirquet in 1907 relating to tuberculosis among children in Vienna. It was found that both in Edinburgh and in Vienna infection begins in the first year of life, and progressing steadily in successive stages is found to prevail in a high degree about the age of puberty, but in Edinburgh the maximum is almost attained at the age-period of 3 or 4 years, while in Vienna the maximum is lower than in Edinburgh in the earlier age-periods (under four years), but attains a greater maximum than in Edinburgh in the later age-periods. As Edinburgh has a much smaller death-rate from phthisis than Vienna and special defences exist against human infection, and yet the poor child population shows a greater degree of tuberculous infection than does the poor child population in Vienna, during a corresponding period, he is driven to conclude that bovine infection is greater than in Vienna, there being practically only two sources of infection in human tuberculosis—the sputum of man and the tuberculous milk of cattle. Again, the fact that abdominal tuberculosis, which especially prevails in the early years of childhood, is very common in Edinburgh and uncommon in Vienna, supports the view that tuberculous milk rather than human infection is the cause, though it is not denied that abdominal tuberculosis may be caused by human infection. If adult phthisis be in most cases a sequel of latent tuberculosis acquired during childhood, any administrative measures which might reduce or prevent infection of children would have a decisive effect in the campaign against tuberculosis.

J. E. BULLOCK.

Tuberculosis amongst children (*'Lancet,'* 1912, II, p. 1343).—**Prof. Nietner**, General Secretary of the German Central Committee for the Prevention of Tuberculosis, in the opening lecture of the new medical school of the Royal Hospital for Diseases of the Chest, London, in October last, stated that during the last ten years researches in Germany had shown that, in a very large number of cases, the infection of tuberculosis occurs during childhood and in the first years of life, Hamburger stating that 90 per cent. of all children up to the twelfth year of life are infected, while Schlossmann states that tuberculosis is a "children's disease" acquired during childhood, and must be prevented and arrested during childhood. As in most cases infection is acquired from a human subject suffering from "open" tuberculosis during the ordinary intercourse of family life; preventive measures are difficult to carry out, owing to social domestic considerations. Nietner recommends special care to safeguard the child in its own home, but deprecates complete separation of the child from its family, thereby weakening family ties and responsibilities. He does not think that tuberculosis is a school disease, that is, that it is spread in schools, but great opportunities rest with the school medical officer in preventing latent tuberculosis developing into active disease; by careful supervision possible

cases could be so picked out that they did not develop active disease during the wage-earning life. In Germany many agencies for promoting the health and welfare of children were closely linked with the school medical service. For tuberculous children open-air teaching was steadily increasing. Nietner strongly recommended tuberculin treatment if properly administered.

J. E. BULLOCK.

Tuberculosis in children: some German institutions (*Birmingham Med. Rev.*, 1912, xx, p. 105).—H. W. Pooler describes the following institutions for combating tuberculosis in Germany: (1) The Forest School for 240 anæmic or debilitated children in the pine forest of Chalottenburg. Children journey by train from Berlin, and are fed either at the cost of the municipality or for 6½d. a day. (2) Day or convalescent camps consist of a "Döcker" administrative building, and a pavilion for the consumptives open on one side and fitted up with lounge chairs. The staff consists of a physician, a nurse, a cook, a maid and a night watchman. The patient remains from 8 or 9 in the morning till 7 p.m. Each patient has a quart of milk and a threepenny dinner. These institutions are useful for completing the cure begun in a sanatorium, for improving the patient's condition to such an extent as to qualify for a sanatorium, and for the house-wife who is unable or unwilling to leave her house altogether. (3) The Victoria Louisa Children's Sanatorium at Hohen Lychen, situated three and a half hours' journey from Berlin in a dense pine forest and on a sandy soil, consists of three sections: (a) 84 beds in permanent and three Döcker buildings for phthisis; (b) 100 beds for bone and joint tuberculosis with operating, Röntgen ray and plaster rooms, and complete apparatus for passive movements; (c) convalescent department for 99 children, where the boys are taught gardening and field work, and the girls do domestic work. A great point is made of each child having separate washing, dental and chamber requisites of a simple character which can be obtained in the forest home. The length of stay for pulmonary cases varies from three to five months; some of them undergo tuberculin treatment.

CHRISTOPHER ROLLESTON.

Tuberculosis in children (*Practitioner*, 1913, xc, p. 280).—E. Pritchard writes an excellent article on this subject. He finds that tuberculous disease is generally of the human type and affects chiefly the lymphatics. He believes more in climatic, dietetic, and general hygienic measures than in tuberculin, which should be given by the "reactionless" method.

F. R. B. ATKINSON.

Tuberculosis in young children (*Arch. of Pediat.*, 1912, xxix, p. 591).—A. Hymanson discusses the difficulty in diagnosis by examination of sputum, fæces and cerebro-spinal fluid, and the unreliability of tuberculin given subcutaneously. Eighty-six infants tested by Von Pirquet's and Moro's methods reacted negatively, while in four of the mothers positive results were obtained. The researches of Bondy, Paten and Griemert, Epstein and Schlossmann give similar information, over 800 infants having been inoculated without a single positive result. All infants are born free from tuberculosis, but the researches of the New York Health Department demonstrate that in over one half of the cases of consumption one or more of the children in these families are affected by the disease. Ritter and Vehling took careful histories in 206 cases of adult tuberculosis, and found that in 82

per cent. the infection was acquired during childhood. Numerous examples of the disease spreading from one member of the family to all the others are quoted. The only method of combating this disease is to remove the child from his home.

CHRISTOPHER ROLLESTON.

Congenital tuberculosis in a child of six weeks (*Jahrb. f. Kinderheilk.*, 1913, LXXVII, p. 95).—**M. Zarfl** showed this case at the Vienna Gesellschaft f. inn. Med. u. Kinderheilk. The mother had pulmonary tuberculosis. Von Pirquet's reaction was definitely positive on the seventeenth day. The spleen was enlarged. Fever soon set in and increased in the following weeks. The child lost flesh, and the liver, spleen and inguinal glands increased in size. The lungs were normal. **Von Pirquet** agreed with the diagnosis of congenital tuberculosis, and said that this was the youngest case in which a positive tuberculin reaction had been observed.

J. D. ROLLESTON.

Primary tuberculosis of the lung in an infant aged 24 days (*Jahrb. f. Kinderheilk.*, 1913, LXXVII, p. 91).—**M. Zarfl**.—The mother died of tuberculosis soon after delivery. The child's death was due to bronchopneumonia following rhinitis. In addition to pneumonia the necropsy showed a caseous focus in the left upper lobe, which was histologically a caseous pneumonia and contained numerous tubercle bacilli. The regional glands were macroscopically normal.

J. D. ROLLESTON.

Tuberculosis in the infant (*Thèses de Paris*, 1912-13, No. 3).—**Dora Mantoux**.—This thesis, inspired by Marfan, is based on the study of 168 cases, aged from 0 to 2 years, observed at the Hôpital des Enfants Malades. The writer's conclusions are as follows: Tuberculosis is frequent in infancy, its frequency increasing as the child grows older. During the first year both sexes are equally affected; during the second, boys are most frequently affected than girls in the proportion of five to two. In 45 per cent. one or both parents are tuberculous; the closer the family life the more likely the contagion. Illegitimate children are less frequently affected than legitimate. Two facts stand out in the history of infantile tuberculosis: (1) Tuberculosis of the bronchial glands is almost always the first important focus. A distribution of lesions suggesting infection by the intestines, or any other route is most exceptional. (2) A tendency to generalisation, which is more marked the younger the child. The writer discusses successively the respiratory, digestive, surgical and nervous manifestations, generalised tuberculosis and latent forms. In every form the lesions found post-mortem are usually much more extensive than those indicated by clinical examination. A reaction of repair is very rarely seen. Mantoux's observations confirm those of Marfan to the effect that tuberculosis, like every chronic infection, may act on the bone-marrow and cartilages of ossification, and determine rickets, especially in the course of the second year. The diagnosis of infantile tuberculosis rests essentially on the reaction to tuberculin. Von Pirquet's test was exclusively used by the writer. The prognosis is very grave. During the first year death is the rule; chances of survival are better in the second year. External localisations are less grave than visceral. Treatment should be prophylactic. The value of specific treatment is far from proved.

J. D. ROLLESTON.

The diffusion of tuberculosis among the school-children of Palermo (*Gazz. internaz. di med. chir., etc.*, 1913, p. 79).—**C. Mauro**.—

During the last two years the number of children attending the out-patient department of the Palermo Pædiatric Clinique who gave a positive cuti-reaction ranged from 17 per cent. during the first months of life to 83 per cent. between 6 and 12 years, *i.e.* at school age. The principal course of the diffusion of tuberculosis in Palermo is family contagion and the chief predisposing cause the bad hygienic condition of the homes. Bovine contagion can be excluded, for in the rare cases in which artificial feeding is used, goat's and not cow's milk is employed. Among 800 school-children the percentage of clinical forms of tuberculosis was as follows: pulmonary tuberculosis 48·05, tuberculosis of serous membranes 23·3, glandular tuberculosis 18·6, of uncertain location 8·4. Mauro recommends the establishment of open-air schools as in other parts of Italy and the continent.

J. D. ROLLESTON.

Initial localisation of tuberculosis of the lung in the child (*Ann. de méd. et chir. inf.*, 1912, xvi, p. 579).—E. Rist states that the most typical primary lesion is a small cavity, about the size of a cherry, in the right lower lobe, with a considerable collection of caseous glands. The apices are quite free of tubercle. Ordinary physical diagnosis will not show this, but X rays will do so with great precision. In later infancy the remains of this lesion are seen with thickening of the bronchial walls, bronchial dilatations, calcified glands, etc.

J. PORTER PARKINSON.

Some diagnostic points in infantile tuberculosis (*La Pediatria*, 1912, xx, p. 723).—O. Cozzolino considers that neither radioscapy nor local tuberculin reactions furnish decisive proofs in the differential diagnosis between a post-influenzal fever protracted for many months and a tracheo-bronchial tuberculosis. Schick's phenomenon, expiratory stridor, maintains its diagnostic value even in the co-existence of tracheo-bronchial adenopathy with clinically appreciable pulmonary tuberculosis. Glandular and pulmonary tuberculosis is not necessarily fatal during the first year of life. The prolonged daily use of large doses (70 to 100 gr.) of cod-liver oil does not necessarily give rise to exudative manifestations as Czerny has affirmed. The differential diagnosis between bronchiectasis and pulmonary tuberculosis in infancy rests more on clinical observation than on laboratory methods. Nevertheless one should not be too optimistic in excluding tuberculosis when laboratory methods fail or give indecisive results, nor, on the other hand, be too pessimistic in admitting such a diagnosis when clinical evidence seems in favour of it.

VINCENT DICKINSON.

Diagnostic value of von Pirquet's tuberculin test (*Amer. Journ. Dis. Child.*, 1912, iv, p. 27).—F. L. Wachenheim, while admitting that most authors are inclined to the opinion that von Pirquet's test is of limited value and important only from a negative standpoint, cites instances to show that this adverse opinion is far too sweeping, and states that a positive reaction should be regarded as an important danger-signal, as evidence that a tuberculous process is either still active or likely to become active, and is never to be carelessly dismissed as a mere relic of a gone and past infection.

J. E. BULLOCK.

A year's experience of von Pirquet's reaction (*Osp. d. Bamb. d. Milan.*, 1912, i, p. 69).—C. Monti-Guarnieri used this test in 121 children, aged from 4 months to 8 years, suffering from various diseases at the Milan

Children's Hospital. The results were as follows: (1) 76 negative cases—(a) 12 deaths, in 7 of which there was post-mortem evidence of tuberculosis and in 5 none; (b) 64 survivors, 14 of whom were very suspicious and 60 slightly so. (2) 17 slightly positive—(a) 3 deaths, in all of whom tuberculosis was found post mortem; (b) 14 survivors, 11 of whom were very suspicious and 3 slightly so. (3) 28 strongly positive cases, 24 of whom were very suspicious and 4 slightly so; there were no deaths in this class.

J. D. ROLLESTON.

Relationship between the infection in the child and clinical tuberculosis in the adult (*Amer. Journ. Dis. Child.*, 1912, iv, p. 13).—

F. M. Pottenger agrees with those who regard active tuberculosis in the adult as usually the result of an infection in childhood. He states that at least 75 per cent. of all children are infected with tuberculosis before they reach their fifteenth year, of whom probably not more than 20 per cent. will develop later "clinical" tuberculosis, and not more than 10 to 15 per cent. will die of the disease. He pleads for the treatment of early latent tuberculosis, which is to be recognised by the von Pirquet test, and draws the analogy of the treatment of syphilis controlled by the Wassermann test. He does not, however, give any indications for the recognition of the time when the treatment may be stopped.

REGINALD MILLER.

The soil and the seed in tuberculosis (*Brit. Med. Journ.*, 1912, ii, p. 1434).—**Halliday Sutherland** cites investigations to show that tuberculosis occurs more among the children of consumptives than among the children of healthy parents; this may be due to their exposure to infection, to their lowered general health or to their heredity. Again tuberculosis occurs more among the children of infectious consumptives than among the children of non-infectious consumptives; this must be due to exposure to infection *plus* lowered general health, resulting from adverse circumstances in the home. Therefore it is not heredity which determines whether the children of consumptives will develop the disease, but the existence of certain immediate factors which are under our control. The difference in the susceptibility of the children of infectious tuberculous patients and of non-infectious tuberculous patients is the direct result of the stage of the disease in their parents; what has been termed for a century "soil" is really the result of the pathogenic action of the "seed."

J. E. BULLOCK.

The teeth in relation to pulmonary tuberculosis (*Med. Press and Circ.*, 1913, i, p. 33).—**G. Thomson** maintains that the prevention of dental caries will do more directly and indirectly towards the prevention of tuberculosis than any other measure that has yet been conceived. In elaborating this theme he discusses the development and care of healthy teeth, and the means (including the dietetic method) of preventing dental caries.

J. ALLAN.

Effects of cold air on blood-pressures of children and young adults in various stages of tuberculosis (*Amer. Journ. Dis. Child.*, 1912, iv, p. 307).—**B. Raymond Hoobler**, as the result of 150 blood-pressure observations, comes to the following conclusions: (1) Blood-pressure in tuberculous children is persistently low. (2) When a patient is transferred to the open air there is a gradual increase of blood-pressure in one or two hours. (3) If a patient is kept constantly in the open air the

pressure is raised to well within the normal limits and kept there as long as he remains in the open air. (4) The more advanced the case the lower the pressure indoors, and the higher the rise in the open air. (5) After several days in the open air the blood-pressure does not fall so much when the patient returns to the ward as it did previously.

J. D. ROLLESTON.

Generalised emphysema in tuberculous meningitis (*Inaugural Dissertation, Berlin,* 1912).—**F. Klose**.—A girl, aged $4\frac{1}{2}$ years, developed cutaneous emphysema of the thorax on the fifteenth day of disease. Death, preceded by convulsions, took place four days later, the emphysema having meanwhile become generalised. No rupture of a tuberculous cavity in the lungs was found. The cause of the emphysema was probably an abnormal cerebral pressure which led to a convulsive seizure, during which rupture of the pulmonary alveoli occurred and gave rise to the emphysema.

J. D. ROLLESTON.

Tuberculosis and asthma (*Arch. de méd. des enf.,* 1913, xvi, p. 96).—**A. Rongel** examined 101 asthmatic children and found von Pirquet's reaction positive in fifty, negative in forty-nine, and doubtful in two. He therefore rejects the view held by some that there is an antagonism between asthma and tuberculosis.

J. D. ROLLESTON.

The bacteriology of the respiratory diseases in children (*Jahrb. f. Kinderheilk.,* 1912, lxxvi, p. 417).—**G. Brückner, W. Gaehtgens** and **H. Vogt** draw attention to the importance of the influenza bacillus in the pathology of respiratory diseases in childhood. It is rarely a harmless saprophyte in the air-passages, and the diseases to which it gives rise have up to a certain stage a special clinical course, manifested by malignancy, tendency to relapses and termination in chronic processes. It has not been decided at present whether the various bacteria present in the sputum in a mixed infection have collectively a pathogenetic influence.

F. R. B. ATKINSON.

Diphtheria bacilli in the lungs (*Münch. med. Woch.,* 1912, lix, p. 2383).—**E. Reye** examined the lungs post mortem in 67 cases of diphtheria and found diphtheria bacilli present in 56. The cultures were usually taken from both lower lobes, and if broncho-pneumonic areas were present, these were cultivated. In 38 of the 56 cases membrane was still present in the throat at the time of death, and in eighteen who had died between the ninth and twentieth days the throat was clean. In 6 cases the bacilli were in pure culture, in 27 they were associated with *Streptococcus erysipelatosus*, and in 23 with other bacteria, especially *pneumococcus*, *pneumobacillus* and *Staphylococcus pyogenes aureus*. Of the 11 negative cases 2 were sterile, 4 showed *Streptococcus pyogenes*, and 5 other bacteria. Broncho-pneumonia was found in 29 cases, or 43 per cent. of the 67 cases. In the 56 positive cases there were 27 cases of broncho-pneumonia or 48 per cent. Reye concludes that up to the twentieth day of disease diphtheria bacilli may be still present in anatomically healthy lungs, though the diphtheritic process in the throat and upper air-passages has long since subsided. Convalescents, therefore, whose throat is free of diphtheria bacilli may still be infectious by their breath.

J. D. ROLLESTON.

Diagnosis of enlarged bronchial glands (*Amer. Journ. Dis. Child.*, 1912, iv, p. 333).—**H. F. Stoll** states that a moderate enlargement of the bronchial glands often gives sufficiently distinct physical signs to render their diagnosis possible by clinical methods alone. The signs are usually most marked in the interscapular space. Ebstein's method of touch percussion will elicit bronchial node dullness that is imperceptible when more force is used. Whispered bronchophony in the interscapular space is the earliest and most valuable sign of swollen bronchial glands. While the spasmodic brassy cough is quite typical of bronchial node tumour, the diagnosis must sometimes be made without it. Continual fatigue, associated with anorexia, afternoon pyrexia and possibly a slight loss of weight should suggest the possibility of tuberculosis.

J. D. ROLLESTON.

Pneumonia in children (*New York Med. Journ.*, 1912, II, p. 468).—**H. Lowenburg**.—The most important points in this paper are the following: (1) There is a form of pneumonia in which fever and its concomitants are the only symptoms throughout the illness. There are no physical signs in the lungs at any time. The symptoms are due, perhaps, to a pneumococæmia. (2) Percussion should be extremely light and the axillæ should always be examined. (3) Normally the inspiratory sound on auscultation on the left side, especially posteriorly, is harsher and louder than on the right. (4) Acute otitis media is frequently confused with pneumonia; the ear-drums should always be examined in every acute attack of high temperature. (5) When the tubes are becoming choked up the treatment recommended is as follows: ʒss to ʒij of castor oil within one to one and a half hours; vin. ipecac. ʒxxx, vin. antim ʒxv every three hours till enuresis is produced, but not more than three doses are to be given; tinct. bellad. ʒv every four hours, gradually increased to ʒxv or xx, and sp. ammon. aromat. ʒv-x; every other hour inhalations of oil of eucalyptus ʒiv, beechwood creasote ʒiv, oil of turpentine ad. ʒiv. One to two table-spoonfuls in a quart of water kept boiling.

F. R. B. ATKINSON.

Prolonged pneumonias in the infant (*Clin. Infant.*, 1912, x, p. 566).—**Jacquard**.—Pneumonias are called prolonged when the fever persists without any complication being recognised. The author found 12 cases in 200 pneumonias. He classifies them as follows: (1) Wandering pneumonia, when one focus clears up and another appears. (2) Double successive pneumonia is pneumonia coming on in the sound lung when the other has not yet cleared. (3) Relapsing pneumonia, when a pneumonia succeeds a previous attack at an interval of not more than three or four days. (4) Pneumonia with a single focus with prolonged course: (a) a typhoid variety, in which the signs of pneumonia do not appear for some days; (b) a simple prolonged variety with normal symptoms but prolonged duration.

J. PORTER PARKINSON.

Herpes in pneumonia (*Lyon méd.*, 1912, cxviii, p. 630).—**E. Weill** and **A. Dufourt** record the following two cases in which pneumococci were found in the hepatic vesicles: (1) Girl, aged 10 years. Herpes of lips, nose, right side of tongue, inner side of right cheek, right tonsil, and posterior wall of pharynx. No clinical signs of pneumonia, but consolidation of right apex shown by X rays. Defervescence on third day. Pneumococci were found in pure culture in the lip vesicles, and associated with other organisms in the vesicles on the tonsil. (2) Girl, aged 12 years,

suffering from pneumonia. Ten vesicles were present in the middle of the lower lip literally swarming with pneumococci.

J. D. ROLLESTON.

Meta-pneumonic pleurisy of children (*Progrès méd.*, 1912, *xl*, p. 341).—**G. Mouriquand** reports a case and draws attention to the importance of cyto-bacteriological examination of the serum. If the effusion is anaërobic and if the polynuclears are not changed, the case is one of ordinary para-pneumonic type and ends favourably. If, however, as in the case reported, the liquid, although clear and straw-coloured, contains altered polynuclears and numerous pneumococci, purulent change will ensue. The successive stages of its development are well seen in the repeated tapping in this case. The author considers *axillary dulness* a most important and trustworthy sign in the diagnosis of this condition. In percussing a case of basal pneumonia, however intense, it is exceptional for the dulness to extend towards the axilla and especially to reach the anterior aspect of the thorax. Only very extensive pneumonias, which are rare in children, give these physical signs. On the other hand, when even the smallest effusion takes place, the axillary resonance becomes less clear and then disappears to give place to complete dulness. In every case where the author has found axillary dulness exploratory puncture has revealed effusion, and he cites an interesting case of a youth, aged 17 years, thought to be tubercular, and in whom evacuation of an empyema caused complete recovery.

VINCENT DICKINSON.

Pneumonia and purulent pleurisy in an infant: recovery (*Semana Medica*, 1912, *xix*, p. 645).—**Zubizarreta** had an infant, aged 28 days, under his care in whom the pneumonic signs were strictly localised. At the right base there was some loss of resonance, the breathing blowing and bronchophony. The rest of the lung and the left lung were quite free. This, with the general symptoms, sufficed for the diagnosis of pneumonia. The following day there was increased dyspnoea and cough, whilst no crepitant *râles* could be now heard, and the dulness soon involved the whole of the right side. Pleural puncture gave exit to pus which showed pneumococci. The child was operated on two hours later, with complete recovery. The writer draws attention to the need of early diagnosis; "every case of pulmonary dulness in a child under one year should be punctured." Beyond withdrawing the pus treatment consisted in keeping the room at a high temperature—28° C.—constant administration of oxygen, and rectal injections of adrenalin.

M. D. EDER.

Emphysema of the pleura, mediastinum and skin in an infant (*Gazz. med. ital.*, 1912, *lxiii*, p. 386).—**V. Gielczynski** describes this case in a breast-fed rickety infant, aged 6 months, suffering from broncho-pneumonia. The lungs were resonant, with diffuse bronchial breathing at the left base and abundant rhonchi everywhere. The temperature continued to rise, the sputum became muco-purulent and the breathing more markedly bronchial. On the tenth day a soft swelling of the skin was noticed on the neck and upper part of the thorax on the right side. The cardiac area was tympanic and the heart-sounds muffled. On the following day cyanosis, rapid shallow breathing (68 per minute), irregular feeble pulse (100) were present; the cutaneous swelling extended to the left thorax, shoulders and neck. The child died the following day, and the autopsy showed numerous

bubbles of air in the right lung and the anterior mediastinum, bronchopneumonia of both lower lobes and right upper lobe. The pleura was healthy, there were right pneumothorax, dilatation of the heart and parenchymatous degeneration of the kidneys. As regards the ætiology of this case, inflammatory processes in the pulmonary tissue and narrowing of the air-passages lead to dyspnoea; air introduced with greater frequency into the healthy alveoli leads to their vicarious distension. Displacement of the bronchioles and closure of the epiglottis during paroxysms of cough cause rupture of the pulmonary vesicles. Prognosis depends on the causal condition; if the subcutaneous emphysema lasts more than four days the prognosis is on the whole favourable, otherwise the issue is fatal. Treatment is inefficacious: some recommend massage, others puncture, but the latter may easily lead to infection. Complete rest and measures which calm the cough succeed best.

VINCENT DICKINSON.

Paratyphoid bacillus B in a pleural effusion (*Nederl. Tijdschr. v. Geneesk.*, 1913, I, p. 91).—**E. S. Frank**.—A child, aged 2 years, had an attack of pneumonia followed by pleurisy. A slightly turbid fluid was withdrawn and yielded a culture of the paratyphoid bacillus B which was agglutinated by the patient's blood-serum in a dilution of 1 in 1600. The organism could not be grown from the blood, the urine or the fæces. Frank thinks that the child had probably had a latent attack of paratyphoid fever, and that the bacilli had been awakened into activity by the attack of pneumonia.

J. D. ROLLESTON.

Daily weighing in the pleurisy of children (*Thèses de Lyon*, 1911 12, No. 2).—**L. V. Simon** records three cases in girls, aged 4, 7 and 10 years respectively, to prove that daily weighing of the patient enables one to estimate accurately the progress of a pleural effusion. The results were controlled by stethoscopic examination and radioscopy, increase in the child's weight corresponding to an increase in the effusion and *vice versâ*.

J. D. ROLLESTON.

Artificial pneumothorax in children (*Monatsschr. f. Kinderheilk.*, 1912, XI, p. 143).—**F. Pielstieker** and **H. Vogt** report ten cases, in eight of which collapse of the lung resulted; in the other two owing to pleural adhesions this did not take place. In all the cases only one lung was diseased. The authors believe as a result of their experience that the operation is of value, but the numbers are so few that no dogmatic conclusions can be drawn from them.

F. R. B. ATKINSON.

Pyopneumothorax with succussion splash (*Ann. de Méd. et Chir. inf.*, 1912, XVI, p. 705).—**Renault** and **Lévy** refer to a case published by Variot and Morancé where the signs of pyopneumothorax were almost confined to succussion splash, and report a similar one in a boy, aged 6 years, who in January and February had a severe febrile illness of unknown cause. In March he began to cough and expectorated large amounts of thick yellowish-green pus. This lasted a month with much wasting and loss of flesh. In May he was admitted to the hospital, when signs of pleural effusion were discovered in the left chest by ordinary methods and by the radiographic screen. Ordinary Hippocratic succussion was absent. Then the succussion splash (*bruit de glouglou*) was tried for. The child was put on all fours, the ear applied to the scapular region of the chest on the

affected side, and on raising the child rapidly by the arm placed round its thorax this splash was readily heard. The chest was then opened and drained in the ordinary way. The writers consider the sign they describe of great value in the diagnosis.

J. PORTER PARKINSON.

Empyema in infants (*Monatsschr. f. Kinderheilk.*, 1912, xi, p. 93.—F. Zybelle has met with twenty-two cases of this condition in the last year and a half in children up to one year three and a half months. Fifteen of the cases died as a result of pneumonia.

F. R. B. ATKINSON.

Streptococcus empyema complicated by erysipelas (*Am. Journ. Obst.*, 1912, LXVI, p. 886).—A. Hymanson.—Three days after thoracotomy for streptococcus empyema, a child aged 6 months developed erysipelas round the wound. Some improvement followed injections of polyvalent streptococcus serum followed by injection of horse-serum into the pleural cavity. Complete recovery, however, did not take place till five months after the onset owing to six attacks of broncho-pneumonia and gastro-intestinal disturbance.

J. D. ROLLESTON.

Vomicæ in children (*Ann. de Méd. et Chir. inf.*, 1913, xvii, p. 33).—Maillet and Anne describe two cases in children, aged 8 years and 2½ years respectively, suffering from expectoration of purulent matter with the signs of a cavity; the first case was due to a purulent pleurisy of the base, and the second followed an interlobar pleurisy after measles.

F. R. B. ATKINSON.

Syphilis of the nervous system in infancy, childhood, and adult early life (*Clin. Journ.*, 1912, xli, pp. 17, 42, 57, 75).—Sydney Owen, in an interesting series of articles, reviews the subject of syphilis of the nervous system in children and young adults. His conclusions are briefly as follows: (1) Syphilis of the nervous system in young subjects is more common than supposed. (2) In a small proportion of cases the disease is acquired. (3) In acquired syphilis nervous symptoms may appear soon after infection; in inherited syphilis they may appear at any time up to puberty, and at the latter period parasyphilis may appear. (4) If it is admitted that a positive Wassermann reaction (with well-defined exceptions) is evidence of past or present syphilis, this reaction is valuable evidence of syphilis. (5) Chemical and cytological examination of the cerebro-spinal fluid will often differentiate syphilis of the nervous system which is amenable to treatment from parasyphilis. "When syphilis appears to produce a primary neuronie decay or dystrophic condition in the nerve structures, apart from any pronounced meningeal changes, we must not expect to find changes in the cerebro-spinal fluid usually associated with syphilis and parasyphilis of the nervous system." (6) Syphilis is apparently responsible for more mental defect than is usually stated. (7) Syphilis is the cause of most cases of interstitial keratitis, but the only cause of hyalitis in infants—a rare but well-recognised form of amaurosis in infancy. (8) During the first few months syphilis is a common cause of meningitis and hydrocephalus. Lumbar puncture and a Wassermann reaction assist the diagnosis. (9) Syphilis may cause a few cases of diplegia, especially of the ante-natal type. (10) Syphilitic epilepsy is infrequent. The author thinks that convulsions are more common in syphilitic than in healthy infants, that in older children syphilis may be the only cause of fits of the "idiopathic type." (11) While

myelitis is common in adults with acquired syphilis, spinal lesions, apart from tabes, appear to be rare in inherited syphilis. (12) Parasyphilis in inherited syphilis resembles that of the acquired disease. (13) The morbid anatomy of inherited and acquired syphilis of the nervous system appears to be identical. (14) Prognosis is grave and early diagnosis is essential. The Wassermann reaction and examination of the cerebro-spinal fluid are efficient aids in diagnosis. (15) As regards the question of the transmission of syphilis, the author thinks that in the majority of cases the infant is infected by the placenta from the mother, who is or has been syphilitic, and that in mild infections or when the virus has been attenuated by time the placenta appears to act as a barrier to the passage of the spirochæte or its toxin. There is one statement by the author to which exception may be taken—that the course of acquired syphilis in the infant differs in no way from the inherited type.

C. F. MARSHALL.

Treatment.

Treatment of empyema with intra-pleural injections of collargol (*Osp. dei Bamb. di Milan.*, 1912, I, p. 37).—**G. B. Grassi** records ten cases in children aged from 14 months to 8 years, in which successful results were obtained by intra-pleural injections of collargol. The amount injected was equal to the quantity of fluid withdrawn.

J. D. ROLLESTON.

A practical method of prophylactic immunisation against tuberculosis (*Med. Record.*, 1912, II, p. 369).—**K. von Ruck** has endeavoured to immunise 339 children by the following method: The vaccine used contained per c.c. 10 mgrm. of proteins of tubercle bacilli and a small amount of their fatty extractives, proportioned as follows: Protein No. 1, 0.25 mgrm.; No. 2, 2.75 mgrm.; No. 3, 1 mgrm.; No. 4, 6 mgrm.; fatty extractives, 0.01 mgrm. A dose of 0.1 c.c. of a 10 per cent. dilution caused the development of the several antibodies and an increase of the blood alkalinity after a single dose. Doses up to 0.6 c.c. were given to children between ten and eighteen years of age. Of the 339 children 85 were normal, 94 suspects and 160 tuberculous. Improvement was shown in the two latter classes by gain in weight, disappearance of enlarged lymph-glands and improvement in their general appearance. The physical signs had in many cases entirely disappeared. The author found that after a single dose of the preparation the induced immunity was still evident in every case re-examined three to eight months afterwards. The dose need not be repeated more than once in five days or a week, and after three or four doses of 0.05, 0.1, 0.2 and 0.4 c.c. given a week apart, an ample degree of immunity can be shown by complement fixation and by the lytic action of the patient's serum upon tubercle bacilli *in vitro*.

F. R. B. ATKINSON.

Adrenalin in whooping-cough (*Brit. Med. Journ.*, 1912, II, p. 1748).—**G. V. Fletcher** recommends adrenalin solution 1 in 1000 by mouth in whooping-cough in doses of one to three minims every three or four hours according to the age of the patient and the severity of the attack. The duration of the attack is materially shortened. The adrenalin also checks the vomiting very quickly.

J. ALLAN.

Phenocoll hydrochloride in whooping-cough (*'La med. de los niños,'* 1911, XII, p. 360).—**Maleras**, on the basis of a recent epidemic, strongly recommends the drug first advised by Professor Vargas in this disease. In fifteen days he thus treated thirty-seven cases (children and adults), with 70 per cent. of cures in that time and with much relief to the other cases.

M. D. EDER.

Iodine in whooping-cough (*'La Pediatría,'* 1912, XX, p. 128).—**A. Cavazzani** uses a preparation which he claims to be stable and not prone to evaporation, and to have a taste which is easily masked. It is thus constituted: Metallic iodine, grm. j, potassium iodide and distilled water, of each, grm. xv. It is given in drops mixed with sweetened milk or coffee in doses of 4-6 drops *per diem* during the first year of life, of 6-10 drops from the second to the fifth year, and from 10-15 drops above this age.

VINCENT DICKINSON.

Vaccines in the treatment of pertussis (*'Arch. of Pediat.,'* 1912, XXIX, p. 581).—**M. Ladd** used a vaccine prepared from Bordet's bacillus in nine cases of whooping-cough. The doses ranged from five to forty million bacteria. A minimum of five days was allowed to elapse between the injections. No ill effects were noted, and after three injections the number and severity of the paroxysms usually diminished. All recovered without complications in about five weeks after beginning treatment.

J. D. ROLLESTON.

Bacterin treatment of pertussis (*'Interstate Med. Journ.,'* 1912, XIX, p. 844).—**J. Zahorsky**, who had previously recorded favourable results from his treatment in institution work (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1912, x, p. 331), now publishes 40 cases in which he had used it in private practice. The ages of the patients ranged from 1 month to 11 years. In his first cases he used 10 million bacteria and later 20 million. The most marked effects were obtained when 30-50 millions were given. Injections were given every three or four days from the beginning of the disease in infants, and in older children at the height of the disease. In about a quarter of the cases no effect was observed from the treatment. In case where pertussis was complicated by bronchitis or broncho-pneumonia the effect was uncertain, or even harm might result. It was questionable whether the treatment hastened permanent immunity.

J. D. ROLLESTON.

Vaccine therapy of whooping-cough (*'Am. Journ. Dis. Child.,'* 1913, v, p. 33).—**A. Bamberger** used a vaccine prepared from deep swabbings of the throat of children with pertussis, each c.c. containing 20 million dead organisms. The cultures were plated and replated until a pure culture was obtained. Six children were treated aged from one to four years. A dose of 20 millions was given every other day, no case receiving less than five injections or more than fifteen. The treatment seemed rather to lessen the severity of the disease and to abort its complications than to shorten its duration. No ill-effects such as fever rashes or joint pains were observed.

J. D. ROLLESTON.

Value of pertussis vaccine (*'New York Med. Journ.,'* 1913, I, p. 176). **G. D. Scott** treated 17 cases aged from 5 months to 8 years who were for the most part poor, ill-nourished and badly developed. He first gave doses

of 10 million to infants and 20 million to children twice a week, but afterwards gave 40 million even to infants, and another dose in proportion to the effect obtained. No bad results whatever resulted from the treatment. All were cured except three, in whom there was, however, distinct improvement.

J. D. ROLLESTON.

Treatment of typhoid fever in the child (*L'Écho Méd. du Nord*, 1912, xvi, p. 393).—**Deléarde**.—Though the prognosis of typhoid fever in the child is better than in the adult, and the complications less numerous, nevertheless great care is necessary. The temperature is rarely high, and quinine and other drugs do not modify the fever. Milk, soups of meat or vegetables, etc., form the chief elements of diet. Constipation is very frequent in children, and abdominal distension may occur, causing dyspnoea, frequency of the pulse, etc., and for this castor oil, magnesia or senna may be given. For diarrhoea benzonaphthol with bicarbonate of soda may be given, or salol and borax. Cold baths are not well borne, but tepid water may be used if necessary. In children over six years an ice-bag to the præcordium will slow the pulse-rate if this is too rapid. If there be pulmonary or cardiac complications sinapisms to the thorax are useful, and to sustain the heart injections of oil of camphor or sulphate of sparteine with strychnine, or adrenalin are indicated; caffeine may cause vomiting and so is undesirable. To prevent emaciation, eggs and starchy foods may be given on the third or fourth day after the temperature has become normal. Alcohol is only necessary when signs of loss of strength are very marked, and then only in small doses. Champagne is useful, or sherry or port wine. The usual precautions of disinfecting the stools, urine and linen should be thoroughly carried out.

J. PORTER PARKINSON.

Treatment of tetanus with magnesium sulphate, with report of three cases (*Journ. Amer. Med. Assoc.*, 1912, LVIII, p. 1746).—**G. Parker** describes three cases, in a boy aged 11 years, girl aged 20 months, and woman aged 44 years, all of whom were treated successfully by this method, given subcutaneously in doses of 8 grm., 4 grm. and 10 grm. respectively of a 25 per cent. solution.

F. R. B. ATKINSON.

Tetanus and magnesium sulphate (*Thèses de Paris*, 1912-13, No. 28).—**J. M. H. Petit** recommends the use of magnesium sulphate in tetanus in addition to serum therapy. The action of the drug is a production of muscular relaxation and abolition of the spasms. Four c.c. of a 25 per cent. solution should be injected intra-spinally every twenty-four hours. Thirteen of the forty-five cases collected by Petit occurred in children aged from 4 to 15 years, nine of whom recovered and four died (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1911, viii, pp. 188-9).

J. D. ROLLESTON.

Treatment of epidemic cerebro-spinal meningitis by intraventricular injections of serum (*Arch. f. Kinderheilk.*, 1912, LIX, p. 72).—**E. Levy** alludes to Fischer's case (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, vii, p. 428), and records a personal one in a child of 3½ months suffering from severe meningitis with left hemiplegia. Lumbar puncture showed a turbid fluid containing meningococci. As all subsequent lumbar punctures were dry, the left lateral ventricle was punctured by a needle introduced at the left angle of the anterior fontanelle; 10 c.c. of turbid fluid were withdrawn and 8 c.c. of serum injected. Rapid improvement

followed, and the child was discharged apparently cured four weeks after the infection. A month later deafness and paralysis of the anterior deep cervical muscles were found as sequelæ of the meningitis. J. D. ROLLESTON.

The diuretic action of infusion of lily of the valley in children (*Progrès méd.*, 1912, XL, p. 499).—**G. Mouriquand and G. Dujol**.—In heart disease the result of its administration was uniformly favourable; a sharp diuretic action ensued the next day. After two or three days this action declined, thus rendering the drug a complementary agent to others which have a more prolonged action. In the subacute nephritis following scarlatina, its action is unappreciable and much inferior to theobromine. In œdematous infants, without albuminuria, the infusion given in the bottle caused a copious flow of urine the following day, which was maintained for two or three days. The œdema rapidly disappeared. In an infant, taken as a control, suffering from pneumonia, the action of the drug was *nil*. With regard to the comparative diuretic action of different preparations of the plant, the authors found that watery extract of the whole plant, given in doses of 1.50 grm. for six days, produced no effect: the same could be said of the powdered plant. Infusions of the entire plant had a definite diuretic effect in some cases. The most marked and rapid effect was, however, obtained by infusion of the *flowers*. Three or four grammes of the flowers are infused for ten minutes in 150–200 grm. of boiling water. The infusion is filtered, and, if strongly sweetened, has a pleasant taste. It is advisable sometimes to associate it with digitalis, which has a slow but less ephemeral action. VINCENT DICKINSON.

The administration of digitalin and theobromine to children (*Gazz. Med. Ital.*, 1912, LXIII, p. 159).—**Nobécourt** asserts that these drugs can be prescribed without fear for children. He uses a solution of crystallised digitalin 1 in 1000, one drop of which corresponds to $\frac{1}{500}$ mgrm. He generally orders one drop *per diem* for five days. If no effect is produced after this time it is better not to continue its administration, although it may be continued without harm for two or three days longer. A child will take the drug readily mixed with water or sweetened milk. The daily dose is given at one time in the morning. The age of the child matters little since digitalin is not a drug to be administered according to age. The indications for its use are cardiopathies and nephritis, especially if accompanied by dyspnoea, cyanosis, tachycardia, œdema, large liver and oliguria. In favourable cases improvement ensues after four to six drops. In nephritis the effect is much less evident. Theobromine may be given in cachets if the child is old enough, otherwise mixed with sugar or honey. Children tolerate the drug well; 40–60 cgrm. *per diem* is sufficient. In nephritis it is most efficient, and helps in producing a diuretic crisis in acute œdematous forms.

VINCENT DICKINSON.

The treatment of hereditary syphilis by “606” (*Lyon Méd.*, 1912, CXIX, p. 716).—**Fabre and Bourret** adopt two methods of treatment: (1) injection of the pregnant syphilitic woman, and (2) injection of the syphilitic infant. They report six cases of the former. They hold that prophylactic intra-venous injection of salvarsan in a woman without definite symptoms is very rarely indicated. In these cases the classic treatment by mercury and iodide is usually efficacious, and exposes the patient to less serious consequences than sometimes follow intra-venous injections of

salvarsan. It is only in exceptional cases, such as inefficiency of mercurial treatment in a previous pregnancy, that injections of salvarsan are to be recommended. In such cases the authors use weak doses, 0.25 to 0.30, because it is not the mother but the ovum that is to be treated. The injection is repeated every three months during pregnancy. In cases where the mother contracts syphilis during pregnancy it is reasonable to hope that the maternal infection may be destroyed before the ovum becomes seriously infected. Hence a single injection of "606" is indicated. The appearance of secondary symptoms in a pregnant woman indicates that the maternal affection is of recent date and in full evolution, and capable of killing the foetus. In these cases also rapid and energetic treatment with "606" is indicated. Eighteen newborn infants were injected. The authors discard intra-muscular injections as being painful and uncertain, and give details for the intra-venous injection of arsenobenzol Billon and of neo-salvarsan. The chief indication for their use is without doubt syphilitic pemphigus, no other treatment being capable of causing such a rapid disappearance of the lesions, and of snatching, in the majority of cases, the newborn infant from an early death. Mucous tubercles and chronic coryza may certainly be cured by mercury and iodides, but in such cases the rapidity of "606" is remarkable. The action of the drug in improving the general health is less certain, so that in the presence of an hereditary syphilis without actual symptoms, but where the general condition is unsatisfactory, the authors consider it wise to commence treatment by mercury and iodides; if these produce no result, injection of "606" can be resorted to. In all cases, however remarkable the efficacy of "606" on the lesions, it should be remembered that it has a very transient action on the evolution of syphilis. Also, when once the acute manifestations are cured by the salvarsan, it is necessary, in order to avoid relapse, to act on the general health either by mercurial and iodide treatment, or more rarely in the infant, by repetition of the injections.

VINCENT DICKINSON.

The treatment of interstitial keratitis by salvarsan (*Med. Record*, 1912, II, p. 760).—G. W. Vandegrift finds no remedy is so good for this condition as salvarsan. It acts more quickly and efficaciously than mercury, and if used when the least trace of acute symptoms is present, it not only checks the inflammation, but absorbs the infiltrate.

F. R. B. ATKINSON.

Treatment of scarlet fever with salvarsan (*Deut. med. Woch.*, 1912, xxxviii, p. 921).—F. Klemperer and H. Woita treated sixty cases of scarlet fever—twenty-one mild and thirty-nine severe—with intra-venous injections of salvarsan. The dose was 0.1 to 0.3 gm. in children and 0.6 gm. in adults. Five died—a mortality of 8.3 per cent.—as compared with a mortality of 24.5 per cent. among forty-nine cases not so treated. After injection in every case there was a rapid fall of the temperature followed by a moderate rise the next day, and then by lysis. As this antipyretic effect did not occur after salvarsan injections in cases of pneumonia, sepsis, articular rheumatism, tuberculosis, etc., salvarsan appeared to have a specific action in scarlet fever. Wassermann's reaction, which others found to remain positive four to five weeks in scarlet fever, after salvarsan treatment became negative on the eleventh day at the latest.

J. D. ROLLESTON.

Noma treated with salvarsan (*Arch. of Ped.*, 1912, xxviii, p. 912).—**M. Nicoll, jun.**, defines noma as a rapidly spreading gangrenous process beginning usually in the mucous membrane of the cheek and jaws, and involving all the surrounding tissues, showing little tendency to self-limitation, and from which fusiform bacilli and spirochætæ can be obtained in great numbers from the smears. At the scarlet fever hospital at the New York Department of Health, during the spring and summer of 1911, there have been eleven cases with nine deaths. Four of the cases had had an attack of measles during convalescence from scarlet fever. One recovered after separation of a sequestrum, and the other after treatment with salvarsan. The latter was a boy, aged 5 years, who developed noma a month after the onset of a severe attack of scarlet fever. Rapid recovery followed two intra-venous injections of 0·3 grm. salvarsan. Twelve hours after each injection there was increased swelling and redness in the inflamed cheek.

J. D. ROLLESTON.

Treatment of ulcerative angina and noma by salvarsan (*Bull. et mém. Soc. méd. Hôp. de Paris*, 1912, xxxiv, p. 91).—**Netter**.—Salvarsan was used in sixteen cases of severe scarlet fever at the Hôpital Trousseau in Paris, usually in local applications of 1 in 10 or 1 in 20 glycerine solutions, and sometimes in intra-venous injections. The action of the drug was prompt and marked. There were seven recoveries among twelve very grave cases. In one fatal case the bucco-pharyngeal lesions were healed, and death was due to gangrene of the lung.

J. D. ROLLESTON.

Salvarsan in affections due to spirilla (*Thèses de Paris*, 1911–1912, No. 257).—**J. A. M. Roger** records a case in a boy, aged 6 years, of Vincent's stomatitis, in which ordinary methods of treatment failed, but rapid cure resulted from local applications of 1·5 neutral solution of salvarsan. Two cases of Vincent's angina in adults, successfully treated with insufflations of salvarsan powder, are also described.

J. D. ROLLESTON.

Remarkable improvement of severe chorea treated by rectal injections of salvarsan (*Ann. de Méd. et Chir. inf.*, 1912, xvi, p. 720).—**Weill, Mouriquand** and **Goyet** relate the case of a girl, aged 13 years, who, since the beginning of 1911, had suffered from chorea which continued till August and reappeared in March, 1912. She was treated with arsenical butter, antipyrin, and oxygen inhalations, but the chorea steadily got worse and she lost appetite and weight. On May 29 she was given by rectum 0·05 grm. of salvarsan, diluted with 100 grm. of normal saline with 5 drops of laudanum, and on June 7, 0·10 gr.; both these injections were retained an hour only. On June 14 she showed slight improvement, which progressed rapidly, and she gained flesh and spirits. The cure was not complete, but there was a very marked improvement, which the writers attribute to the treatment.

J. PORTER PARKINSON.

Rectal administration of the salicylates in the influenza of infancy (*Med. Record*, 1912, ii, p. 199).—**G. W. Beatty** states that 60 per cent. of patients taking salicylate show salicylism. He regards the following as symptoms of that condition: deafness, tinnitus, headache (sometimes delirium), nausea, vomiting, a slow pulse, flushed face, epistaxis,

hæmaturia with or without albuminuria, erythema and urticaria. He recommends for the influenza of infants the use of suppositories of oil of theobroma containing quinine and methylene-citryl-salicylic acid (nov-aspirin).

REGINALD MILLER.

Treatment of ulcerative impetigo (*La Clin. Inf.*, 1912, x, p. 351).

—**G. Variot** has obtained excellent results in the treatment of certain forms of *impetigo rodens* by painting them twice daily with a solution of 1 per cent. methylene-blue. The extension of more or less deep erosions was arrested immediately by these compresses, and healing took place rapidly. In a few days complete cure was obtained in circumscribed forms. In severe and extensive forms cure was rather slower. It is sufficient to cover the parts painted with methylene-blue with compresses of sterilised gauze.

VINCENT DICKINSON.

Tincture of iodine in regeneration of the epidermis (*Gaz. méd. d. Sci. méd. de Bordeaux*, 1912, xxxiii, p. 502).—**Petit de la Villéon**

warmly recommends the pure tincture of iodine of the French codex in the treatment of extensive skin wounds in children, especially in burns. Applications should be made daily with a brush, and be followed by the application of sterilised gauze and wool.

J. D. ROLLESTON.

Reviews.

BAKTERIOLOGISKE STUDIER OVER BARNETUBERKULOSE, KRISTIANIA, 1912.

By A. DE BESCHE. Pp. 256, 4 plates.

THIS is an elaborate research on tuberculosis in childhood, based on 134 autopsies made in the Christiania Pathological Institute under the direction of Professor Francis Harbitz, the well-known authority on tuberculosis. In a long series of cases the author describes his bacteriological results, and compares them with those obtained in other countries based on a very complete study of the literature up to date. One important point rightly emphasised by the author is that the cases were unselected. The actual cases examined were as follows:

Age.	Total number of cases.	Tuberculous cases.
0-1 years	58	14 = 24.2 per cent.
1-3 "	28	11 = 39.3 "
3-5 "	14	7 = 50 "
5-15 "	34	20 = 58.8 "
	134	52 = 38.8 "

In each of the 52 tuberculous cases material was taken from the cervical and the mesenteric glands and injected into guinea-pigs with a positive result. Twenty-eight of the cases had died of tuberculosis, 14 had latent tuberculosis and 10 had "latent tubercle bacilli." In 50 of the cases the tubercle bacilli were isolated and studied, with the result that 45 were found to conform to

the *typus humanus* and 3 to the *typus bovinus*. In one case there appeared to be a mixture of the two types, and in one case it was very difficult to determine the type. Among the cases in which the *typus humanus* was found, there were five where the portal of invasion was primary in the abdomen and four or five in which the primary seat were the cervical glands. One of the bovine cases was probably primary in the abdomen, whereas in the other bovine cases the primary portal of invasion could not be determined with certainty. The author was unable to satisfy himself that the course of the bovine infection was milder than the human. The great majority of cases of tuberculosis in children are, according to his results, human in origin, although, he considers that prevention should be directed both to the human as well as bovine infective material.

W. BULLOCK.

DIE EXSUDATIV-LYMPHATISCHE DIATHESE. By Dr. PAUL SITTLER.
Würzburg: Curt Kabitzsch, 1913. Price M. 3.50.

To read this book is to realise how great is the gulf which separates English from German medicine at the present day. This conception of an exudative diathesis has taken a firm hold upon German thought, and the literature upon the subject has already swollen to enormous size. In England, on the other hand, with the exception of a short paper contributed by a German visitor to the meeting of the British Medical Association at Birmingham in 1911, the matter has hardly been discussed at all. Put in as few words as possible, the conception of this diathesis is that of a congenital inherited abnormality of constitution which renders the infant unduly susceptible to certain dietetic disorders, and which in later childhood manifests itself in a great number of pathological conditions, which not only differ in character in different individuals but vary from time to time in the same individual. It should follow logically from this conception that symptomatic treatment of the different manifestations of the diathesis will be unsuccessful unless at the same time the underlying abnormality of constitution is attacked by dietetic and hygienic measures. In infancy the diathesis shows itself by a retardation of growth and development, even in good hygienic circumstances and upon a suitable diet. Common manifestations are attacks of seborrhœic eczema, with a copious exudation on the scalp, asthma-like paroxysms of acute exudative bronchitis, and attacks of diarrhoea marked by the passage of much mucus and eosinophil cells in the stools. The prevention of these various attacks and an increase in the rate of growth is to be attained by a diminution in the amount of fat and by the addition of larger quantities of carbohydrates and, if possible, of cereal foods to the diet. An intolerance for cow's milk is characteristic of the condition.

In later childhood symptoms of the most varied sort are to be expected in the subjects of the diathesis—general glandular enlargement, lymphatism, anaphylaxis, migraine, cyclical vomiting, rheumatism, mucous disease, laryngismus stridulus, orthostatic albuminuria—these and many more pathological conditions are all swept into the net and regarded, not as separate disorders, but as different manifestations of a single diathesis. At the same time it is insisted upon that all cases do not show marked or characteristic symptoms, and that the great majority of children who are said to be "threatened with tuberculosis" or to be suffering from anæmia are to be included in the group.

Whatever opinion may be passed upon the propriety of such an attempt to link together so great a variety of disorders, the nature of which, in many

cases, is still but imperfectly understood, it must be acknowledged that the present work achieves its purpose admirably and expresses the accepted teaching in Germany in the clearest and most concise way possible. The greater part of the book, not unnaturally, is devoted to symptomatology, but room is found for a complete discussion of the treatment, consisting chiefly of dietetic and hygienic recommendations, and for an inquiry into the essential cause and nature of the constitutional abnormality underlying the different manifestations.

H. C. C.

OCCASIONAL PAPERS ON THE PREVENTION OF SOME COMMON DISEASES IN CHILDHOOD. By J. SIM WALLACE, D.Sc., M.D., L.D.S., Dental Surgeon to the West End Hospital for Nervous Diseases. London: Baillière, Tindall & Cox, 1912. Pp. 103. Price 3s. 6d. net.

THE title of this book is a misnomer, as with the exception of dental caries, adenoids, and, incidentally, tuberculosis, the common diseases of childhood are not mentioned even so much as by name. To oral sepsis, however, the author vaguely attributes 20 or even 50 per cent. of children's diseases—a statement with which we cannot agree. The book consists of nine articles, many of which have been already published, three as long ago as 1908, and one in 1909. It contains nothing new, and for the most part consists of a reiteration of the author's views as to the cause of dental caries and adenoids. That caries of the teeth is mainly due during the first dentition to soft food which does not demand efficient mastication and at a later age to an improper dietary and unsuitable carbohydrates was promulgated by Dr. Wallace certainly as far back as 1900, while his theory that adenoids are caused by the admission of cold, damp air through open windows at night was published in 1908. These views are set forth again and again throughout the present volume with a repetition which becomes somewhat wearisome, whole pages in one article being almost identical with those in another.

Tuberculosis is very briefly dealt with in an article on the prevention of the disease, and the discussion of the routes of entry of the bacilli into the system is quite inadequate. Dr. Wallace considers that the commonest portal is by way of the faucial and pharyngeal tonsils when these are in a diseased state. He adduces no proof, but simply uses the statement to introduce once again his theory of adenoids being caused by open windows in damp localities.

The last chapter on infant mortality and milk is likewise disappointing, to say the least of it. Six pages only are devoted to the subject, and these are almost entirely taken up with an attempt to show the unsuitability of a milk diet for nursing mothers and growing girls. Breast-feeding is, of course, advocated, but all that is said about the artificial feeding of the infant is the bare statement that "cow's milk must always be unsatisfactory for children."

There is undoubtedly some truth in the author's remarks concerning the dietary of children, but that improper food is the chief cause of dental caries is, we think, still a matter which is open to doubt. Dr. Wallace states that "now practically the whole of the influential part of the dental profession hold (*sic*) views similar, if not identical, to" his own. We must leave it to the members of the dental profession to say whether they do.

T. R. W.

HERSELF: TALKS WITH WOMEN CONCERNING THEMSELVES. \$1.00. CONFIDENCES: TALKS WITH A YOUNG GIRL CONCERNING HERSELF. 50 cts. TRUTHS: TALKS WITH A BOY CONCERNING HIMSELF. 50 cts. FALSE MODESTY: THAT PROTECTS VICE BY IGNORANCE. 50 cts. By DR. E. B. LOWRY. Chicago: Forbes & Company.

It seems nowadays to be generally accepted as desirable that the woman should know something of her internal organs, and on the whole Dr. Lowry imparts the information with sufficient reticence and accuracy. The anatomical and physiological details are, curiously enough, since they come from a medical woman, sounder than the medical and hygienic hints scattered through the volumes. In the first volume, for instance, women are told that if every woman would assume the knee-chest position *once or twice a week* she would be greatly benefited—"for the majority of women have a slight falling of the womb." Again, we are told that, many a woman who has been nervous all her life owes her condition to a hooded clitoris, . . . "a hooded clitoris also may have something to do with the immoral life of some girls." Dr. Lowry also comes out in defence of the modern corset.

In the 'Confidences' the author has attempted something altogether beyond her powers. It requires no mean gift of literature "to tell in suitable language the facts that should be known by every young girl from ten to fourteen years of age," and this gift is just not possessed by Dr. Edith Lowry. In 'Truths' her intentions are equally laudable and equally a failure. We are not at all sure that it were not better for boys and girls to acquire their knowledge of sex matters in the usual furtive way, with all its dangers, than to read these chapters on "The Baby's Nest," "Building the Nest," and so on. These little books might serve, however, as useful hints to the mothers or fathers who desire to instruct their children. It is almost time to warn simple-minded persons like Dr. Lowry that they are expecting altogether too much from their attempts at imparting scientific information on sex to girls, boys and youths. In itself it will do but little to prevent the ills we all deplore. Outside the strictly sex teaching there are plenty of sensible hints in these books; sensible advice to girls about their feeding, about the possible need of rest during menstruation, about undue worrying over business matters, and about "false medical advice" and so on. With greater experience and a good deal of hard thinking Dr. Lowry might write a book quite worth a woman's reading.

M. D. E.

THE CARE OF CHILDREN. By ARTHUR MILLER, M.D., M.R.C.S., L.R.C.P. London: Eveleigh Nash, 1912. Pp. 272. Price 2s. 6d. net.

THIS volume contains valuable hints to mothers and others on the care of children from birth onwards. The subjects of feeding and hygiene are well discussed, and there are two good chapters dealing with the common ailments of childhood, besides a valuable chapter on remedies and recipes for making various foods. We can heartily recommend this book on a subject of which a good deal of ignorance exists amongst the laity.

F. R. B. A.